

लाल बहादुर शास्त्री प्रशासन अकादमी
Lal Bahadur Shastri Academy of Administration

मसूरी
MUSSOORIE

पुस्तकालय
LIBRARY

अवाप्ति संख्या
Accession No..... ~~105240~~ 105240
वर्ग संख्या
Class No..... 331
पुस्तक संख्या
Book No..... Int

STUDIES
ON
INDUSTRIAL RELATIONS

INTERNATIONAL LABOUR OFFICE

STUDIES AND REPORTS

Series A (Industrial Relations) No. 38

STUDIES ON INDUSTRIAL RELATIONS

III

The Canadian National Railways. — The Pequot Mills, Salem, Mass., U.S.A. — A Paris Department Store. — The Norwegian Nitrogen Company. — Industrial Relations in the Grand Duchy of Luxemburg.

GENEVA
1935

Published in the United Kingdom
For the INTERNATIONAL LABOUR OFFICE (LEAGUE OF NATIONS)
By P. S. KING & SON, Ltd.
Orchard House, 14 Great Smith Street, Westminster, London, S.W. 1

PRINTED BY ALBERT KUNDIG — GENEVA

CONTENTS

	<i>Page</i>
INTRODUCTION	VII
THE CANADIAN NATIONAL RAILWAYS	
General Characteristics of the Railways	1
The Organisation and Administration of Industrial Relations	2
Accident Prevention	33
Health	35
Conclusion	40
THE PEQUOT MILLS OF THE NAUMKEAG STEAM COTTON COMPANY, SALEM, MASS., U.S.A.	
The History, Scope and Nature of the Mills	43
The History of Industrial Relations	46
Waste Elimination and Joint Research	53
Regular Collaboration between Management and Workers	57
Conditions of Work	58
Employment and Training	60
Safety, Health and Welfare	62
Influence of Labour Legislation	65
Conclusion	66
A PARIS DEPARTMENT STORE (LA SAMARITAINE)	
How a Department Store Works	71
The Staff	78
Co-Partnership and Profit-Sharing	84
Social Insurance	93
Welfare	98
Conclusion	109
THE NORWEGIAN NITROGEN COMPANY	
Introduction	111
Conditions of Labour	114
Housing Policy	118
Social Hygiene and Welfare	124
Workers' Spare Time	127
Conclusions	129
INDUSTRIAL RELATIONS IN THE GRAND DUCHY OF LUXEMBURG	
General Introduction	131
The Arbed-Terres Rouges Amalgamation	135
Legislation governing Industrial Relations	142
Employers' Social Institutions	168
Conclusions	182

INTRODUCTION

This volume contains a further series of studies on industrial relations, supplementing those published under the same title in 1930 and 1932¹.

The origin and purpose of these monographs were fully explained in the introductions to the first two volumes, to which the reader may be referred. It will be well to repeat here, however, that no attempt has been made to compare one country, one industry or one undertaking with another. The object has been merely to give as faithful a picture as possible of the relations existing between management and staff within the particular undertaking. It should again be emphasised that these undertakings have been selected as illustrations, not as patterns; it is left to the reader to draw such lessons from them as he may wish.

The studies were previously restricted to European countries, but their scope has been extended beyond those limits in this third volume, where two of the five articles deal with undertakings in North America—one in Canada and the other in the United States. It was thought desirable to devote another monograph to one of the Scandinavian countries, as there are few parts of the world where conditions are more favourable for the development of industrial relations. In the present series of studies, a commercial establishment has for the first time been included, the one selected being one of the large department stores in Paris. In the case of the Arbed undertakings (United Steel Works of Burbach, Eich and Dudelange, in Luxemburg) the method adopted differs somewhat from that of the other studies. This is one of the rare cases in which a single undertaking is responsible for a large proportion of the industrial activity of the country in which it is situated;

¹ INTERNATIONAL LABOUR OFFICE. *Studies on Industrial Relations*: I. The Siemens Works, The Lens Mining Company, The London Traffic Combine, The State Mines of the Saar Basin and The Bata Boot and Shoe Factory—Studies and Reports, Series A (Industrial Relations), No. 33, Geneva, 1930. II. The Zeiss Works, The F.I.A.T. Establishments, The Philips Works and The Sandvik Steel Works—Studies and Reports, Series A, No. 35, Geneva, 1932.

the question has therefore been treated from the national standpoint, and the study covers industrial relations in the Grand Duchy of Luxemburg¹.

The Office wishes to express its gratitude to the firms which allowed its representatives to make the necessary investigations on the spot and to the members of their staffs who kindly assisted them in their task. The Office also wishes to place on record once again its debt of gratitude to Industrial Relations Counselors, Inc., New York, whose financial assistance has helped it to carry through the present series of studies.

¹ Those who visited the various undertakings on behalf of the Office were as follows: *Naumkeag Company* and *Canadian National Railways*: Mr. G. A. JOHNSTON; *Arbed Works* and *Samaritaine Stores*: Mr. P. HENRY; *Norwegian Nitrogen Company*: Mr. E. ERICHSEN.

The Canadian National Railways

GENERAL CHARACTERISTICS OF THE RAILWAYS

The Canadian National Railway system operates a network of lines extending throughout Canada from Halifax in the east to Vancouver and Prince Rupert in the west and to Athabasca and Churchill in the north. In the south, its lines penetrate into the United States, in particular the New England States, Michigan, Illinois, Indiana and Minnesota. The total mileage of railroad in operation in 1933 was 23,750.

The system is the result of the co-ordination in 1918-1923 of four distinct transportation groups. First, a unified management was set up in 1918 for the Canadian Government Railways and the Canadian Northern Railway Company, and then to these were added the Grand Trunk Pacific Railway in October 1920, and the Grand Trunk Railway Company in January 1923.

Like the railways of other countries, the Canadian National Railway system has suffered severely as a result of the economic depression. In 1929 the Canadian National Railways' gross revenues showed a decline of \$13,053,649 from 1928; in 1930 the decline from the previous year amounted to \$48,264,281; 1931 saw a decline of \$50,462,939 from 1930; in 1932 the decline was \$39,401,568 as compared with 1931, and in 1933 \$12,583,852 as compared with 1932. The total receipts in 1933 were \$148,519,742.43 as compared with \$312,286,031 in 1928, a decrease of \$163,766,289 or 52.44 per cent.

To meet the situation, economies have been effected through the elimination of unprofitable services, the reduction and reorganisation of the supervisory staff, closing of stations and office buildings, laying off a large number of employees, and by such other measures as could be made effective without bearing too heavily upon the communities served. At the end of 1933 the staff was approximately 36.59 per cent. below the 1929 level. The total payroll, on the other hand, was 45.9 per cent. below the 1929 figure.

The average number of employees and amount of wages and salaries they received, from 1929 to 1933 inclusive, was as follows:

Year	Average number of employees	Remuneration
1929	111,383	177,037,682
1930	101,046	159,980,994
1931	91,416	139,784,630
1932	76,616	106,911,608
1933	70,625	95,632,076

The elimination of a great many unprofitable passenger services has been brought about by a severe curtailment of passenger train miles. The reduction in passenger train miles from 1929 was 9,557,496. Some idea of the extent of these reductions may be gained by realising that they are equivalent to wiping out practically one-third of the passenger train service operated in 1929.

It is clear from the figures quoted that the undertaking has been passing through a very difficult period, and it is therefore all the more interesting to examine, in the light of these circumstances, the working of industrial relations in the system.

THE ORGANISATION AND ADMINISTRATION OF INDUSTRIAL RELATIONS

It is clear that no single form of industrial relations would be adequate to cover such a wide range of functions and occupations as the operations of the system cover; and in fact, as we shall see, there is considerable variety in the practice of industrial relations in the Company. But this variety is always subject to the guiding principle of the labour policy of the Company, which is to ensure the active and willing collaboration of its staff in all grades and occupations.

Throughout the whole staff of the Company there is a spirit of singleness of purpose and unity of aim which dominates every aspect of its operations. Until the appointment of three trustees under the 1933 legislation, one of the Directors of the Company was the President of the Trades and Labour Congress of Canada. Many of the general officers of the Company have been promoted from the lower grades. The management keeps in close touch with the railway unions, and throughout the various departments provisions for regular contact and negotiation are, as we shall see in detail, carefully made and applied.

The Canadian National Railways is a member of the Railway Association of Canada, which comprises all the steam railways of Canada.

The employees are in the main members of the various railway trade unions. The railwaymen's unions in Canada are, with one exception, "international" unions, that is to say they organise railwaymen both in the United States and Canada. So far as internal organisation is concerned, one of the vice-presidents of the union is generally appointed to look after Canadian affairs. These international unions are the following:

Brotherhood of Locomotive Engineers.
Brotherhood of Locomotive Firemen and Enginemen.
Order of Railway Conductors
Brotherhood of Railroad Trainmen
Order of Railroad Telegraphers.
United Brotherhood of Maintenance of Way Employees.
Brotherhood of Railroad Signmen of America.

In addition to these international organisations, there is a purely Canadian body which has no international affiliations. This is the Canadian Brotherhood of Railroad Employees, which covers clerks, freight handlers, and station, stores and shop labourers.

Finally, the shop craftsmen are federated in the Canadian National Railway System Federation No. 11, which covers machinists, boilermakers, blacksmiths, carmen, sheet-metal workers, electricians, pipe fitters and moulders.

For purposes of negotiation with the Railway Association of Canada, the shop crafts have constituted the Railway Employees' Department, Division No. 4, American Federation of Labour.

Collective Agreements

Wages and conditions of labour on the Canadian National, as on all Canadian railways, are in general regulated by national collective agreements concluded between the railways and the respective railwaymen's organisations.

Separate agreements are concluded for the various categories of staff, and these are, by mutual agreement, revised from time to time. All agreements are subject to revision or cancellation on thirty days' notice, except that for the maintenance of way and signal department employees which provides for a sixty days, notice. As an example, it may be mentioned that for the locomotive and car departments, the appropriate collective agreement is Wage Agreement No. 6, governing rates of pay and rules of service,

consolidated and issued on 15 July 1927 and amended 16 April 1929. Since that date this agreement has remained unchanged, except for percentage reductions of wages.

The Settlement of Grievances

When an employee feels he has been unjustly treated or that he has a grievance in connection with wages or working conditions, he may take the matter up either directly or through his local chairman up to and including the superintendent of the division; if the matter cannot be adjusted with the superintendent, the local chairman may turn over the case to his general chairman, who, if he considers there is merit in the employee's contention, will appeal the case to the general superintendent, and, if necessary, to the general manager. When it is impossible for the general manager and the general chairman to agree, then, if it is a case of interpretation of the schedule, the general manager will refer the matter to the Chief of Wage Bureau, Montreal, for an interpretation before definitely declining to adjust the dispute. If the general manager's contention is upheld, the general manager and the general chairman write up the case—first agreeing on and writing "a joint statement of facts"—after which the employees will set out their contentions, and the railway officer does the same. The dispute is then referred to the Board or Committee provided for in the agreement between the railway and the respective organisation.

In the case of the following organisations, the case would be referred to the Canadian Railway Board of Adjustment No. 1.—created in August 1918 for the purpose of adjusting grievances:

Brotherhood of Locomotive Engineers.
Brotherhood of Locomotive Firemen and Enginemen.
Order of Railway Conductors.
Brotherhood of Railroad Trainmen.
Order of Railroad Telegraphers.
United Brotherhood of Maintenance of Way Employees.

This Board is composed of twelve members, six being representatives of labour organisations—generally vice-presidents—and six railway officers, a chairman and vice-chairman being elected from among the twelve members, such position alternating every six months between a railway officer and an officer of the labour organisations. It deals with all disputes between the respective railway managements and the employees, members of these trade unions, concerning the interpretation or application

of wage schedules or agreements which have not been settled by direct negotiations. Disputes arising out of the negotiation of new agreements as to wages and working conditions are not dealt with. Under the terms of the agreement, decisions of the Board are binding. In the event of a majority vote of the members of the Board not being obtained, provision is made for the appointment of a referee.

Disputes between the railways and other employees not represented on this Board may, by joint submission, be referred to Board of Adjustment No. 1 provided the parties to the dispute agree that the decision of the Board shall be accepted by each party as final and binding.

A similar tribunal, the Canadian National Railways Employees' Board of Adjustment No. 2, was organised in 1925 by agreement between the Canadian National Railways and members of the Canadian Brotherhood of Railway Employees, for the purpose of disposing of grievances or disputes which may arise respecting the application, non-application or interpretation of agreements as to wages or working conditions. The Board is composed of eight members, four of whom are selected by the railway management and four by the employees concerned. A majority vote of the full Board is necessary for a decision which is binding upon the parties. Here, also, if no decision is reached provision is made for the appointment of an arbitrator.

These boards have done excellent work, and have been very useful in maintaining a harmonious relationship between employees and the railways.

In the case of shop crafts' employees the arrangement in effect for handling disputes is that the joint write up of the general manager and general chairman is sent to the Railway Association; the secretary of the Association notifies the Sub-Committee on Wages and Working Conditions, and also advises the president and secretary of Division No. 4, and a meeting is arranged through a board consisting of ten members—five being labour organisation representatives and five being railway representatives.

In either case, whether the matter is referred to the Canadian Railway Board of Adjustment No. 1, or to the Railway Association of Canada's Sub-Committee, the parties to the dispute are advised of the date the dispute will be heard. Both parties appear before the Board of which they are a party, and, in addition to the written statements, submit oral arguments in support of their respective contentions. The Board asks of each party such questions as, in its

opinion, will help to clarify the point at issue, after which the parties to the dispute retire and the Board considers the case and arrives at a decision, which is made unanimous once adopted.

On the whole, the results obtained through this procedure have been very satisfactory.

Boards of Conciliation

If agreement cannot be reached as a result of direct negotiation between the railway companies and the employees, a Board of Conciliation may be set up under the Industrial Disputes Investigation Act. This Board is an *ad hoc* body consisting of three members, one appointed on the recommendation of the workpeople involved in the dispute, one on the recommendation of the employers, and a chairman appointed on the recommendation of the other two members. The Minister of Labour makes any appointments necessitated by failure to recommend.

The functions of the Board are first of all conciliation. If conciliation fails the Board's findings are published. These findings set forth the facts and circumstances of the dispute, including the causes, and the Board's recommendations for the settlement of the dispute, these latter dealing with each item and stating in plain terms "what, in the Board's opinion, ought or ought not to be done by the respective parties concerned". The parties to a dispute may agree to be bound by the recommendation of the Board "in the same manner as parties are bound upon an award made pursuant to a reference to arbitration on the order of a court of record". The recommendation thereupon becomes enforceable on the application of either party.

The most characteristic feature of the Industrial Disputes Investigation Act consists of the provisions enforcing a waiting period before a strike or lock-out is lawful in industries of public interest. Section 56 of the Act lays down that "it shall be unlawful for any employer to declare or cause a lock-out, or for any employee to go on strike on account of any dispute prior to or during the reference of such dispute to a Board of Conciliation and Investigation", while section 57 adds that "employers and employees shall give at least thirty days' notice of an intended or desired change affecting conditions of employment with respect to wages or hours; and in the event of such intended or desired change resulting in dispute, it shall be unlawful for the employer to make effective a proposed change in wages or hours, or for the employees

to go on strike until the dispute has been finally dealt with by a Board". In both cases the penalty for infringement is a fine, for employers of not less than \$100 nor more than \$1,000 for each day or part of a day that any illegal lock-out or change exists, for employees of not less than \$10 nor more than \$50 for each day or part of a day that such employee is on strike.

Precautions are taken that these provisions shall not be used for purely obstructionist purposes. It is laid down that a Board, if its creation is approved, must be established within fifteen days of application. It is further provided that if, in the opinion of a Board, either party uses the section relating to the advance notification of changes in wages or hours, or any other provision of the Act, for the purpose of "unjustly maintaining a given condition of affairs through delay", such party shall be guilty of offence and liable to the same penalties as are provided in the case of an illegal strike or lock-out.

In 1931, the Canadian National Railways, together with the Canadian Pacific Railway, applied for the establishment of a Board of Conciliation under this Act in connection with a proposed wage reduction for running trades and telegraphers. The Board made a majority award on 30 November 1931 in favour of a 10 per cent. reduction in wages for these categories of employees.

The Joint Co-operative Plan

As the most distinctive feature of industrial relations on the Canadian National Railway is the so-called "Joint Co-operative Plan", it will be necessary to describe in some detail not only its constitution but also its origin and development.

When the Grand Trunk Railway Company had been included as part of the Canadian National Railway system, it was employing a bonus plan of remunerating its shop workers at all its major repair points both in Canada and the United States. Opinion developed on the Canadian National Railway system, especially among officials, in favour of inaugurating the bonus method of payment on other sections of the Company's lines, a proposal which at once gave rise to vigorous controversy. Though many formerly in the employment of the Grand Trunk Railway Company were satisfied with the operation of the bonus plan, it soon became evident to officers of the shop craft organisations that hostility would be shown to its wider extension by a large proportion of workers on the system as a whole. In view of this fact, Mr. J. A. McClelland, a

vice-president in Canada of the International Association of Machinists, considered a move to establish some form of co-operation between management and men on the Canadian National Railway system which might stop, or at least discourage, the spread of the bonus method of payment. He communicated with Mr. William H. Johnston, President of the International Association of Machinists, seeking to learn more of the objectives of co-operation as it was being advocated by him. He also sketched for Sir Henry W. Thornton, then President of the Company, what he thought it might mean if applied in the mechanical department of the Canadian National Railway Company. Sir Henry Thornton foresaw the advantages which the introduction of co-operation might have in establishing improved industrial relations on the great railway that had recently come under his supervision. Early in the summer of 1923 he wrote to Mr. William H. Johnston stating that he would be glad to discuss the co-operative movement with him if he would make a trip to Montreal. President Johnston could not go at that time, and for six months the matter was in abeyance. In December Mr. McClelland again talked with Sir Henry Thornton about co-operation and received his assurance that he was willing to give it a trial on the lines of the Canadian National Railway Company.

On 11 January 1924, a meeting of general managers, mechanical superintendents, and other officers of the Canadian National Railway System was held in Montreal, at which Mr. William H. Johnston and Captain Beyer were present. The meeting was inclined toward an acceptance of a plan of co-operation, but before its conclusion agreed that no steps could be taken to introduce it on the railway until the approval of each of the shop crafts involved had been secured. With this in mind the Railway Employees' Department of the American Federation of Labour arranged to have the claims of co-operation presented before the fifth annual convention of Division No. 4 when it assembled at Montreal on 24 March. Mr. B. M. Jewell, president of the department, Mr. William H. Johnston and Captain Beyer attended the convention, and early in its proceedings delivered addresses dealing with the co-operative movement from almost every angle. A special committee of fifteen members was then appointed to study the issues which the adoption of a plan of co-operation would present to the shop crafts in Canada. In a report submitted on March 28, this committee advised that Division No. 4 go on record as endorsing the principle of co-operation, but that each system federation

adhering to it should decide, from the standpoint of labour, whether it was ready to have a plan put into effect on the lines under its jurisdiction. The policy might be followed of first agreeing with management upon one particular shop where the plan would be given a fair test. No action, however, should be taken before the membership at that point had signified its approval. The report was finally adopted on a roll-call ballot of the convention by 85 votes to 29.

Endorsement of co-operation by Division No. 4 had cleared the way for its acceptance, so far as labour was concerned, on any Canadian railway, but only on the Canadian National Railway system was management willing to go along with the movement. Conversations between officers of the Canadian National Railway Company and its System Federation No. 11 continued throughout the remainder of the year. In the interval Captain Beyer made a personal survey of the leading repair points on the system in Canada and prepared a report which he submitted to the Company for consideration on August 23. Finally, the shop at Moncton, New Brunswick, a point on the former Canadian Government Railways, was selected as an appropriate spot to launch the movement. Industrial relations had always been harmonious at Moncton, but nevertheless production was at a relatively low ebb. After a sanctioning vote of the local crafts had been taken, the first joint co-operative meeting on the Canadian National Railway system was held at Moncton in January 1925. The plan was next extended to the locomotive repair shop at Stratford, Ontario, and thereafter by degrees to other of its major shops in Canada. The sentiment of the men at the different points was generally discovered through what to Canadian railroaders is known as "caboose talk" (gossip in the guard's van), the tenor of which would indicate when a favourable vote might be secured and the plan successfully inaugurated.

As early as August 1925 the co-operative movement was carried to the western region of the Canadian National Railway system, but only at first to its Fort Rouge and Transcona shops at or near Winnipeg, Manitoba. In consequence of the spread of One Big Union doctrines in western Canada after the war, leading to the famous general strike at Winnipeg in 1919, the shop crafts affiliated with the American Federation of Labour in that area had been reduced to skeleton proportions. "One Big Union" advocates showed their dislike for co-operation, when its introduction was discussed, by calling it "the Canadian National slave pact". However, as

the management of the railroad entered into co-operative relations only with representatives of the international craft unions, a change was gradually effected in the labour situation at its Winnipeg shops. All the craft unions began to experience a marked accession of strength after the inception of co-operation. In January 1927 management and men agreed upon a constitution for the joint co-operative plan, which according to orders issued in April of the same year was to be extended, if locally acceptable, to all engine-houses and smaller car repair points in eastern Canada where approximately fifty or more men were employed. Following a visit paid by Captain Beyer to Battle Creek, Michigan, in 1926, the plan was introduced at that station and then transmitted by stages to other points on the Grand Trunk Western Lines and to the strip of mileage belonging to the Canadian National Railway Company in New England. In 1926 and 1927 provision was made for the selection of a regional committee in each of the railways' three regions located mainly in Canada, and for the formation of a joint system committee¹.

In 1930 the principles of the joint co-operative plan were extended to the Maintenance of Way and Structures Department of the system. When this extension was first contemplated, it was anticipated that there might be some difficulty in securing the full co-operation of forces so widely scattered, but under the wise planning of the Brotherhood's consulting engineer and the whole-hearted support of the Railway Executives expected difficulties melted away or were overcome. In order that the plan could be successfully launched it was decided to make a survey of the field and a representative of the Brotherhood and the Railway was selected for this work. As a result of this survey, covering 22,000 miles of roadway from coast to coast, it was decided that the plan was practicable and desirable and a report was submitted outlining the organisation and plan for putting the movement into operation.

From first to last the co-operative plan received the strongest support from Sir Henry Thornton. It could not, of course, have been introduced on the railway without his consent. And, once introduced, he continued personally to follow its development, or rather to stimulate its development, with the greatest interest and the most active sympathy. His attitude to the plan at its inception

¹ L. A. Wood, *Union-Management Co-operation on the Railroads*, p. 96 New Haven, 1931

was clearly stated by him at the Convention of the C.N.R. System Federation in 1928.

"I am satisfied", he said, "that if both parties to the plan do their part it can be made a success, so that the employees and the people of Canada will profit by the effort. It opens up a large field, and if this plan proves a success in the shops where it is being tried out, then there is no reason why it could not be extended to all branches of the railway. I am hopeful that we will continue our activities in this direction, as we all have, including all the people of Canada, a stake in the property. I desire to thank the officers for their loyalty to the plan, and I can say that in the last three years there has been, first, a spirit of confidence in one another built up, second, pride amongst our men in the Canadian National Railways, third, constantly improved service. I have faith in co-operation, and can assure you that it is our job to give full measure in our service, and on this we can be assured rests the foundations of our success. We stand committed to the principle of co-operation."

Sir Henry Thornton continued his personal interest in the working of the co-operative plan until his retirement in 1932, and since then Mr. S. J. Hungerford has continued to support it. Mr. Hungerford was appointed President by the Trustees on 31 January 1934. In spite of the economic depression both the management and the men retain their confidence in the plan.

Co-operation in the Railway Workshops

The joint co-operative plan was first introduced, as we have seen, in the railway workshops. The constitution of the plan, adopted in 1927, lays down that Joint Co-operative Committees shall be appointed at each large motive power and car repair shop, and also at locomotive roundhouses and car repair points, including repair tracks, where approximately fifty or more men are employed.

Before giving a detailed description of the functioning of the plan, it will be useful to explain briefly the nature of the work undertaken in the workshops and repair points.

From the operating standpoint, railroads in Canada keep the train car and motive power sections of the mechanical department carefully apart. The two sections, however, may lie contiguous to one another on a single strip of railroad property where certain plant facilities may be used in common. If both are combined for administrative purposes, it is usual railroad practice to allow precedence to the motive power section. The labour force of each section is always considered as a separate entity, and should workers of one be employed by the other, it becomes a matter

of entry in the bookkeeping records. Maintenance of train car equipment of the railroads involves a recognition of three classes of repairs: running or inspection, light and heavy. Running or inspection repairs are mostly performed when trains are halted according to timetable, thereby avoiding car detention. But in the case of light and heavy repairs cars are cut from the trains, and held out of service. Maintenance operations on cars cut from trains lasting from approximately one to twenty man-hours are ordinarily classified as light repairs. Rip or repair tracks, varying in number with the comparative importance of the station, are placed at the disposal of these cars, and a force of experienced carmen and helpers begin to repair them. Employment here is on the straight eight-hour basis. Occasionally all or a portion of the day shift of a yard gang, if near at hand and unoccupied, may be requisitioned for work on the rip tracks.

Under a light repair schedule, time is permitted among other things for the jacking up of cars, the removal of trucks, and, if necessary, the mounting of new wheels; for the straightening of parts of steel structure by means of the blowtorch; and for important repairs to be made to air brakes and other safety appliances.

Heavy repairs to train cars are rated as consuming more than twenty man-hours of applied labour. Although some heavy repairs are done on rip tracks, the major proportion are completed within shops or on nearby shop tracks, equipped with facilities for the purpose.

Locomotives are repaired at power terminals, known as engine-houses or roundhouses, where they are taken after they have finished a trip or day's work, or they are repaired at special shops of one description or another. When a locomotive is brought in from a run, its condition is reported by the engineer in charge who has noted any faults in performance, and it is then placed on a pit for regular inspection. All minor defects that may be remedied quickly are attended to before the locomotive is despatched on its next run. Should something more serious be disclosed in its condition, it may be detained for repairs beyond the scheduled hour for departure.

As a general rule the facilities provided at locomotive and car repair shops in Canada do not differ very materially from those in the shops operated by the railways in Great Britain, except in so far as is necessary for the handling of the much larger and heavier locomotives and cars. Main locomotive shops equipped for heavy repairs to and rebuilding of locomotives on the Canadian National

are located at Moncton, Quebec, Montreal, Stratford and Winnipeg. Car shops are located at Moncton, Quebec, Montreal, Toronto, London and Winnipeg. On the Grand Trunk Western the locomotive shop is located at Battle Creek and the car shop at Port Huron. Both the locomotive and car shops for the Central Vermont Railway and New England lines are located at St. Albans. The total staffs of the main shops as at January 1933 amounted to 7,594. In addition there are 224 roundhouses and 198 car repair points reaching from the Atlantic to the Pacific and from Portland to Chicago, the total staffs of which amount to 11,172 making a total of 18,766 employees in the department.

Constitution of the Joint Committee

There are three grades of joint committees, the shops committees, the regional committees and the system committees.

The Constitution lays down, in the case of shops committees, that at major shops the committees shall consist of one representative from each shop craft, appointed by the respective crafts, the members of this committee to act for a period of one year from the date of their appointment. At the larger roundhouses and car repair points the committee shall consist of three representatives of the employees. At smaller points the committee shall consist of two representatives of the employees. Should the craft representative be removed from the locality or service, the craft affected shall appoint a representative from its membership to fulfil the term of office. The Railway Company shall also appoint an equal number of representatives from the local superintendent's staff, including one representative from the Stores Department. The local shop superintendent or head of the department shall act as chairman at all meetings. In case of emergency it shall be the privilege of the committee to call on any employee to attend a meeting when necessary.

A regional committee shall be appointed consisting of the executive officers of each shop craft. An equal number of representatives shall be appointed by the General Manager on the respective regions to represent the Company. The Chairman to be appointed by General Manager.

A system committee shall consist of officers appointed by the vice-president of operation of the Railway Company, and the following representatives of the employees: Chairman of Division No. 4; Chairman of Canadian National System Federation No. 11; Secretary

of Canadian National System Federation No. 11, and the federation representative from any region or craft not directly represented. This committee to have the privilege of calling in any executive officer of the company or any representative of the men mutually desired.

The joint committee at each major locomotive and car repair shop shall meet twice each month, on the first and third Tuesdays. The joint committee at all roundhouses and car repair points shall meet once each month, on the first Tuesday. The regional committee shall meet, at the call of the chairman, once each year. It shall be the privilege of the chairman of the regional committee or system committee to call an additional meeting at any time. It is left within the jurisdiction of the regional committee to reduce the meetings of all major shops from two meetings per month to one, if such action is felt desirable.

The scope of the work of the joint committees is clearly laid down in their Constitution:

"The committee shall confine their recommendations to such subjects as apply to the advancement of the industry under the jurisdiction of the chairman, or to the welfare of the employees under his jurisdiction and to the betterment of the railway's service to the public"

And it is further explicitly specified that no subject which would affect wage agreements already in operation is to be considered by the committees. The committees confine their recommendations to the advancement of the industry, the welfare of the workers, and the betterment of the railway's service to the public. The committees do not deal with grievances which arise about working conditions established by agreement between the trade unions and management. The committees are therefore not concerned with the thorny problems of distribution, or other matters of conflict. They deal solely with questions of constructive co-operation, in which the interests of management and workers are largely similar. The regular association on terms of equality of representatives of the management and the workers in constructive co-operation can, however, hardly fail to provide a better basis for understanding and agreements between the management and the trade unions during bargaining over wages and other questions of distribution.

Operation of the Joint Committees

Careful minutes are kept of the proceedings at all committee meetings, and elaborate statistics are prepared on the results of

the discussions. The following table gives a summary of the suggestions offered at all co-operative committee meetings on the system from 1928 to 1933. It will be noted that the great majority of the suggestions were offered by employees.

**SUMMARY OF SUGGESTIONS OFFERED AT CO-OPERATIVE
COMMITTEE MEETINGS, 1928-1933**

Year	Total suggestions	Number accepted	Number dropped	Pending at 31 Decem- ber 1932	Brought up by	
					Manage- ment	Employees
1928	2,431	2,018	413	—	393	2,038
1929	2,430	2,070	356	4	436	1,994
1930	2,240	1,776	456	8	503	1,737
1931	2,919	2,414	473	32	681	2,238
1932	1,247	1,393	178	176	397	1,350
1933	1,374	1,046	145	183	334	1,040
Total Percentage	13,141 84.5	10,717 81.5	2,021 15.3	403 3.1	2,744 20.9	10,397 79.4

The data given below show the kind of work undertaken by the committees. They indicate that the subjects discussed are largely concerned with improvements in the efficiency of work.

**CLASSIFICATION OF SUGGESTIONS OFFERED BY CO-OPERATIVE
COMMITTEES**

	1928	1929	1930	1931	1932	1933
Prospect. business cards, sales of money orders, etc.	5	2	16	44	31	12
Measuring production system	—	3	1	3	1	2
Operation of co-operative plan	14	14	19	11	11	3
Apprentice instruction	2	4	3	1	4	—
Passes, half-fare orders, etc	4	2	9	8	4	—
Co-operation in production, im- proved work, punctuality, etc.	14	15	12	7	3	1
Increase in staff, promotions	8	26	16	7	3	4
Safety and first-aid	74	60	124	800	535	379
Fire prevention	—	—	51	286	179	155
Standardising forces	—	2	1	3	—	1
Condition of shops and grounds, heating, sanitation, repairs	323	289	420	472	296	258
Output records	5	4	6	15	8	1
Development new devices, ma- nufacture equipment for shop	273	285	183	105	64	46
Purchase new shop equipment	298	320	220	131	52	46

CLASSIFICATION OF SUGGESTIONS OFFERED BY CO-OPERATIVE
COMMITTEES (*continued*)

	1928	1929	1930	1931	1932	1933
Care of tools and machinery	45	41	30	49	22	28
Repairs to machinery	437	434	238	157	83	106
Defective materials, purchase materials	128	73	69	54	28	23
Manufacturing material instead of purchasing	28	24	36	29	31	15
Economy, reclaiming material	77	65	63	93	46	45
Storage and handling materials	172	160	143	83	43	22
Standardising materials	6	13	4	1	3	9
Shop methods and practices	292	381	320	336	177	139
Alteration to standard designs for locos, and cars	59	46	79	63	41	10
Maintenance locos and cars	114	79	96	92	43	53
Lunch rooms, lockers, etc.	—	44	43	34	16	6
Miscellaneous	53	44	48	35	23	10
Total	2,431	2,430	2,240	2,919	1,747	1,374

The constructive work of the committees may be illustrated by examples taken from the minutes of various meetings. A number of the decisions deal with improvements in working conditions, including safety measures, which contribute both to the convenience and comfort of the workers and to an increase in their output. Thus, improvements in lighting the workshop and the avoidance of excessive heat in summer or cold in winter form the subject of various decisions. Provision of adequate ventilation to prevent nuisance from fumes, the supply of goggles to workers grinding tools, and the erection of screens to protect the eyesight of workers employed near electric welding apparatus are among other recommendations made for improving workshop conditions. A number of subjects concern greater convenience in the location of machinery, material and tools so as to eliminate unnecessary walking for the men or movements of the parts of engines under repair.

Many of the recommendations on organisation, methods of work, and economy are highly technical. Mention may be made here of one or two of the less technical decisions. Thus the employees' representatives on one of the committees suggested an improvement in the method of building up worn pistons by bronze welding. Another suggestion made by an employee was that the deck planking used between the tank and frame on some of the older

tenders be spaced at wider intervals, resulting in an economy of timber. It was estimated that the saving would amount to over \$750.00 per annum. One of the employees' representatives noticed that many engines brought for repair had nuts which were badly damaged, apparently by being loosened or tightened by chisels instead of proper tools when the engine was away from the shop. In consequence many of these nuts, which cost from \$3.50 to \$4.00 each, had to be scrapped. This meant considerable loss to the Company. The committee before which the question was brought decided to bring the matter to the attention of those concerned. This resulted in a great improvement.

Examples of this kind taken from the records of the committee meetings could be given by the hundred to show the value of the co-operative plan in leading to improved output and reduced costs by better organisation of work and elimination of waste of time and materials. The plan gives the workers an active interest in the organisation of their work and enables them to share with the management in considering the best methods of performing the tasks on which they are jointly engaged. Some of the men's suggestions would no doubt be made by individual workmen to foremen in factories and workshops which have not established a plan of organised co-operation. But the Canadian National Railways Co-operative Plan provides a systematic channel for co-operation and ensures that each suggestion shall be given adequate consideration. The individual worker takes his suggestions readily to his union representative on the co-operation committee, or it may be first brought forward and given preliminary consideration at a meeting of the trade union branch. Often problems of workshop organisation and technique form the subjects of lively discussions at the trade union meetings. The workers' representatives therefore have the benefit of the experience and advice of all the members. It might be argued that most of the men's suggestions could have been made by the foremen. This neglects the fact that the individual workmen in performing their tasks are more intimately associated with their work, and improved methods may occur to them which might easily escape the notice of foremen. The plan, therefore, usefully supplements the foremen's work.

The plan also gives the management an opportunity to submit for consideration changes in organisation and methods of work which it proposes to make. The workers are thus able to participate in a preliminary discussion of the proposals and to share in determining the best methods of introducing and applying the new

measures. This has the value of avoiding the resistance to sudden changes in long-established practices or arrangements which might be encountered if the workers had not been given an opportunity to express their views or to co-operate in the introduction of the changes. The workers thus have the satisfaction not only of using their experience for constructive purposes, but also of working under a system in which autocracy has largely given place to co-operation. Both men and management are convinced of the value of the plan.

The workers naturally desire to share in the material as well as in the psychological consequences of co-operation. Among material benefits are improved workshop conditions and higher earnings. The financial value of the Co-operative Plan to the Canadian National Railways system is difficult to measure in dollars and cents. However, as a consequence of the benefits received, the Company was able to introduce in 1928 the system of one week's holiday with pay each year for all workers with two or more years' service, i.e. for a total of approximately 16,000 men.

A further benefit both from the point of view of the Company and of the men is to be found in the stabilisation of employment. Stabilisation of employment in railroad service, especially in the maintenance branches, was considered one of the most important steps in the programme of the co-operative plan. There is perhaps no greater single factor militating against a wholesome interest on the part of industrial workers in matters of basic concern to management than the fear of working themselves out of a job. If practical steps can be taken to allay this fear and to assure every employee that everything possible is being done to keep him employed, then the greatest menace to co-operation between workers and management will be removed, and the Company, as well as the employees, will share in the benefits of stabilised employment. In fact, the company's benefit from this source will be twofold. In the first place, steady employment means steadier production, and secondly, it will bring about more efficient plant utilisation. Nothing affects the overall performance of any organisation of railroadmen, whether they be employed in the office or in the running or maintenance service, so much as repeated increases and decreases in staff. Also workers in an environment of unstable employment cannot help but try to make the job last as long as possible; not only do they do this instinctively, but they worry about what they will do for a living when the job comes to an end. Consequently, the morale of the organisation is at a low level.

Steady employment brings about a more wholesome atmosphere, which, though perhaps intangible, is as potent a factor in good service, high-grade workmanship, and efficient shop operation as any other factor.

Co-operation on the Permanent Way

It was in 1930, as we have seen, that the principles of the Joint Co-operative Plan were extended to the Maintenance of Way and Structures Department of the system. There are over 20,000 workmen employed in this Department, and the extension to them of the committee system presented special difficulties owing to the fact that they are scattered in small groups over the length and breadth of the system.

The Constitution of the Joint Committees

Joint committees were established similar to those in the workshops, and it was provided that there should be one System General Committee, four Regional Committees, ten District Committees and forty Divisional Committees.

In addition to the regular members of the committee the higher railway officers, superintendents, general superintendents, and general managers as well as executive officers of the Brotherhood of Railway Maintenance of Way Employees frequently attended these meetings as observers. In order to expedite consideration of matters with a regional or system application, a small system and regional executive committee was formed to meet when required upon the call of the Chairman.

It was considered advisable, in initiating the Divisional Committees, to start with one of the most important divisions on each Region and after these committees were working smoothly to extend the movement to all Divisions. This was done and worked out to the general advantage, as observers from the districts and regions attended and they became familiar with the proceedings in advance of the general expansion over all divisions.

It was obvious that representatives of the employees who are regularly employed should have some means of contact with the men in the territory they represent. An effective method of allowing the committee member who is an employee two days' leave of absence with pay and transportation in advance of the regular time of meeting so that he could get in touch and confer with the maintenance gangs was devised.

No formal method of procedure for the various committees was laid down, as it was intended that any project that would contribute to the mutual welfare and helpfulness could be discussed. Criticisms and fault-finding were to have no place in the discussions. Grievances, wages and working conditions were to be dealt with, as they always had been in keeping with the regular wage agreements between the Railway and the Brotherhood of Railway Maintenance of Way Employees.

It was understood that there would be no limit to the range of subjects which might be offered for consideration so long as they aimed at mutual helpfulness. A partial list of subjects which might be considered was offered as follows:

(1) Proper tools and equipment; (2) care and distribution of tools; (3) delivery and care of materials; (4) improving methods of performing work, (5) improving standard facilities; (6) maintenance of way rules; (7) new business for the Railway; (8) building up of working forces; (9) improving working conditions; (10) living and housing conditions; (11) education and training of employees; (12) accident prevention.

Operation of the Committees

The Co-operative Movement on the Permanent Way has been working since June 1930 over the entire system and in the view of the Railway has been an unqualified success.

The following tables give a summary of the suggestions offered at all co-operative meetings on the system from 1930 to 1933:

CLASSIFICATION OF SUGGESTIONS OFFERED BY CO-OPERATIVE COMMITTEES

	1930	1931	1932	1933
Improving working conditions	1,263	681	454	295
Improving housing conditions	906	666	381	249
Care and distribution of material	414	290	205	129
Improvement and care of motor, hand and push cars	286	246	205	165
Methods of performing work	394	409	215	152
Accident prevention	106	137	135	71
Maintenance of way rules	35	26	24	8
New business for the railroad	39	30	15	6
Building up working forces	65	26	16	16
Education and training of employees	30	31	16	9
Greater regularity of employment	91	56	18	4
Betterments to appliances and work equipment	237	286	173	117
Miscellaneous	151	107	67	34
Total	4,017	2,991	1,924	1,255

**SUMMARY OF SUGGESTIONS OFFERED AT CO-OPERATIVE COMMITTEE
MEETINGS, 1930-1933**

Year	Total sugges- tions ¹	Number accepted	Number dropped	Number deferred	Number pending	Brought up by	
						Manage- ment	Employees
1930	4,017	2,071	1,068		878	418	3,599
1931	3,863	1,928	956	428	557	735	2,256
1932	2,909	1,393	635	360	523	590	1,334
1933	2,138	1,074	554	124	386	373	882

¹ Including those carried over from previous year as " pending " or " deferred ".

It is difficult to pick out from the many benefits and improvements that have resulted from the co-operative meetings one that stands out above the others, but it would seem that the best and most fundamental achievement as the result of these " Round Table Conferences " is the birth of a better understanding and more kindly feeling between the railway officers and employees. Barriers have been removed, petty grievances have been forgotten and a consistent co-operative inclination manifested which has been the means of putting into effect many suggestions for mutual welfare.

In analysing the suggestions that have been brought forward by the employees through the committeemen at the various meetings, the most numerous and frequent were in regard to improving working conditions so that a better job could be done for the Railway. Standard tools have been changed, remodelled and improved; practices and policies affecting the daily work were inaugurated with mutual benefit. So many suggestions were obviously an improvement that they were immediately adopted, while others were placed under investigation by experts, which resulted in changes and an increased efficiency in service.

The second most frequently discussed suggestion was in regard to housing conditions. It is only natural that the thoughts of the worker should turn to the living and housing conditions of himself and his family. It is obvious that the employees or their families who are suffering or uncomfortable in their homes, boarding cars, bunk and toolhouses cannot give the best service during their working hours. This feature was recognised by the Railway as an obligation, and concerted and systematic efforts are being made towards removing petty annoyances induced by discomfort in living and recreation quarters.

The third in importance of the suggestions relates to the

distribution and care of materials. These discussions took a very practical form, so that considerable improvement has been made in requisitioning, recording and storing materials. Lessons in avoiding waste are being introduced with object lessons in unit costs of some of the smaller materials with the result that the interest in conserving materials is stimulated.

Climate and snowfall have so much effect upon the ordinary maintenance activities in Canada that it is most difficult to find ways or work by which the usual working season can be extended for the regular employees. It is obvious, therefore, owing to the short season in which maintenance work may be satisfactorily performed, that there will be large numbers of regular summer men who will be furloughed in the winter months. How best to take care of the men who are employed only during the summer months has been one of the most important subjects taken up by the Co-operative Committees. Investigations as to economy and practicability of using a regular number of trackmen all the year instead of the usual variation in summer and winter forces have shown that this is feasible in some divisions and will be tried. Bridge and building maintenance has been rearranged so as to prolong the working season by deferring such work as can be satisfactorily performed in the winter months, and on some divisions the "B & B" work has been rearranged so that the same number of men are now employed all the year round.

Taking care of the unemployed during the periods of regular seasonal reductions of the maintenance forces has been actively taken up by the Committees. One of the results has been that the employing officers have earnestly accepted this matter as a part of their responsibilities, and in consequence a regular and systematic method of recording and classifying applications for further employment has been put into effect on each division. An identification card is furnished to each furloughed employee, and an application form is filled out by those desiring work and filed in each superintendent's office. Contractors doing work for the Railway are requested to give preference to the railwaymen out of work, also the Governments, cities and municipalities are canvassed for jobs. This plan has had a most beneficial result in providing work for those looking for it.

The growth of modern transportation, increase in wheel loading and higher speed of trains has brought about the need for greater refinement in track maintenance. In consequence the education and training of the track forces to a higher standard has been

undertaken. A small committee was selected and the services of an expert engineer obtained to make a survey of the field, investigate methods in use on other railways and devise a practical plan to meet the requirements. In addition, a tentative plan for the training of trackmen has been initiated with considerable success. One sectionman is carefully selected from each roadmaster's territory on the Division and placed with selected foremen in turn one month with each, then for six weeks or a month successively with yard gangs and extra gangs. At the end of the season he undergoes an examination and is rated for promotion whenever a vacancy is open. This plan is providing qualified men for the position of foreman.

Monthly educational letters on matters pertaining to daily work of the Maintenance of Way forces are issued.

HOURS AND WAGES

The eight-hour day is in operation on the Canadian National Railways. During the depression, hours of work have been reduced, wherever practicable, in preference to dismissing staff. It was considered that wherever such a course was compatible with the maintenance of efficiency, as large a number of men as possible should be retained in employment, with reduction of hours and reduction of wages. The depression, however, has been so severe that large numbers of men have had to be laid off. The following table gives details with regard to the reduction of the personnel and the reduction of the payroll from 1931 to 1933.

PERSONNEL AND PAYROLL IN 1931, 1932 AND 1933

	1931		1932		1933	
	Number	Amount	Number	Amount	Number	Amount
Officers and staff assistants	854	4,892,246	754	3,968,985	629	4,201,603
Clerical and general employees	14,571	22,188,337	12,510	18,092,786	11,440	16,545,905
Maintenance of way and structures employees	21,621	24,992,559	17,713	19,546,618	17,055	18,240,586
Maintenance of equipment employees	25,758	35,422,263	20,607	24,170,561	18,616	21,682,327
Transportation employees	11,079	17,080,824	9,686	13,667,610	8,829	12,040,797
Train and engine employees	11,623	27,059,781	9,970	20,655,535	9,369	17,905,978
Telegraph employees	3,290	4,021,724	2,964	3,318,159	2,466	2,931,462
Express employees	2,620	4,126,896	2,382	3,491,324	2,221	3,083,418
<i>Less</i> Charged other accounts		12,833,788		7,218,725		6,000,839
Operating labour	91,416	126,950,842	76,616	99,692,883	70,625	89,631,238

Some of the most important measures taken in respect of hours and wages in 1931 and 1932 were as follows:

As a measure of economy, main repair shops were closed for one week during the months of July and August 1931, and from 1 September a reduction of 10 per cent. was made in working hours, reducing the hours to an average of thirty-six instead of forty per week. During the year a time reduction plan of one-half day per week without pay was, by mutual agreement, applied to the following forces: clerks and certain other classes covered by schedule; non-schedule clerical forces (including all monthly rated employees earning less than \$4,000 per annum); maintenance of way and bridge and building forces; telegraph department employees; signal department employees. From 1 August, following a resolution of the Board of Directors, a reduction of 10 per cent. was made in salaries of all officers and employees earning \$4,000 or over per annum. From 1 December, a 10 per cent. reduction in the remuneration of the running trades and telegraphers was made.

This 10 per cent. deduction for the running trades and railway telegraphers was continued throughout 1932. During the year negotiations were carried on with various labour organisations leading to agreements for a reduction of 10 per cent. in the basic rate of wages on Canadian lines. On 1 May 1932, the reduced time plan of half-day per week applicable to clerical forces, maintenance of way employees and other miscellaneous employees was cancelled, and the rates of pay of these employees made subject to a reduction of 10 per cent. On the United States lines of the Canadian National as on all railroads in the United States the Chicago agreement was put into effect on 1 February 1932. This agreement called for a reduction of 10 per cent. in the wages of all railway employees. In 1932, a survey was made of all salaried positions paying \$2,700 or more per year. A reduced salary scale was put into force, the percentage reduction being heavier in the higher paid positions. In addition, the reduced salaries were further made subject to a 5 per cent. deduction.

PENSIONS AND PROVIDENT FUND

Owing to the fact that the C.N.R. is the resultant of the grouping of previously independent railway companies, it has in operation three separate pensions schemes, as well as a provident fund, but two of the pensions schemes are now closed to further entrants. The C.N.R. is proud of the fact that it holds two records in the

matter of pensions and provident funds, for one of the schemes (the Grand Trunk Superannuation, established in 1874) was the first railway pensions scheme to be formed in America, and another (the Grand Trunk Railway Insurance and Provident Society established in 1885) was the first railway employees' insurance society in America.

Canadian National Railways Pension Act

The Canadian National Railways Pension Act of 1929 set up a system of non-contributory pensions. The Pension Committee consists of nine members, seven of whom are officers of the Company, and two members from the ranks of officers of the recognised labour organisations on the Canadian National Railways. It is intended that all employees shall be retired on reaching the age of 65 years. This may be varied by Pension Committee on recommendation of Heads of Departments in certain cases. No pension is to be at a lower rate than \$25.00 per month. No person whose age upon entry to the service exceeds fifty years is eligible for pension. Pensions are calculated at the rate of one per cent. for each year of service on the highest average rate of the employee's wages or pay during any ten consecutive years of his service, the calculation to be made on the gross amount from time to time credited to the employee on the payrolls of the Company without deduction of any kind.

Pensions may be granted on retirement in the following cases:

- (a) To an employee retiring at the age of sixty-five or over, with fifteen or more years' service to his credit.
- (b) To an employee of sixty and under sixty-five years with twenty or more years' service retired by reason of permanent physical or mental disability on certificate of Company's Chief Medical Officer that employee is unfitted to follow his usual or other suitable employment in the Company's service.
- (c) To an employee who after ten or more years' service becomes incapable of continuing by reason of injuries received while actually at work in the Company's employ, but only for so long as his incapacity continues.
- (d) To an employee of fifty years and upwards with fifteen or more years' service who is discharged otherwise than for misconduct.

Subject to approval of the Directors the Pension Committee may grant a pension to an employee on account of special circumstances of his particular case where on retirement he may not be eligible under provisions specifically stated above.

These rules and regulations supersede and take the place of the present Grand Trunk Pension Rules and Regulations and all other

pensions or existing pension rules excepting those pertaining to the Grand Trunk Railway of Canada Superannuation and Provident Fund Association.

*Intercolonial and P.E.I. Railway Employees'
Provident Fund Act*

This Act of 1907, amended in 1913, set up a system of contributory pensions. The Board consists of five persons, three being Chief Officers of the Railway "appointed from time to time by the Honourable the Minister of Railways, and one of whom, the General Manager, shall always when present act as Chairman, the remaining two being elected triennially by employees contributing to the Fund". The Fund is administered by the Minister through the Board in accordance with the Act and with the Rules and Regulations of the Board.

The Fund is created by means of contributions by every employee of one and a half per cent. of his regular monthly salary or wages. This percentage is deducted each month from payrolls. The Government contributes to the Fund, out of the gross earnings of the Railway, an amount at least equal to total monthly contributions by employees, but not exceeding one hundred thousand dollars in any one year, in such sum or sums as the Governor in Council from time to time determines to be necessary for maintenance of the Fund. The Fund is vested in the Government, which allows interest thereon at 3 per cent. per annum, which interest is added to and forms part of the Fund. No person over 35 if inexperienced or over forty-five if experienced in railway work is permitted to become a member of the Fund.

The retiring rules are as follows:

- (a) Those who have attained the age of seventy after being fifteen years in service.
- (b) Those who after fifteen years in service become physically or mentally incapacitated from following their usual occupations in the service.
- (c) Those who have attained the age of sixty after being fifteen years in service, and request to be retired¹.

¹ This regulation as quoted from the Act was modified in 1907, permitting only those certified as physically or mentally unfit to retire upon request at the age of sixty. A further modification in 1925 permits those who have attained the age of sixty and who have had forty years' service to retire voluntarily, this superseding a previous modification made in 1913 permitting retirement after reaching sixty years of age and after thirty-five years of service.

- (d) Those who are permanently disabled as a result of injuries received whilst on duty and actually at work in the service.
- (e) Those who prior to the coming into force of this Act entered the service at such advanced age as to cause them to reach the age of seventy before being fifteen years in the service; provided that on attaining the age of seventy they have been at least ten years in the service.

The allowance paid under the Act is a monthly allowance of one and a half per cent. of the average monthly pay received by an employee for the eight years immediately preceding his retirement for each year of his service and is paid monthly upon retirement for the remainder of his life. No monthly allowance may be less than \$30.00 or more than two-thirds of the said average monthly pay. No refund of contributions made by members is permissible to (a) those, except as provided in the Act, who voluntarily retire from the service, and (b) those discharged from the service for wilful default, misconduct, negligence in performance of duties, drunkenness, fraud or dishonesty, and are not reinstated. Any employee discharged on or after 1 April 1907 for or on account of having been engaged in partisan work in connection with a Dominion or Provincial election, the Board with approval of the Minister may pay out of the Fund the whole of such employee's contribution, but without interest. Employees discharged for any cause other than mentioned in (b) above, after having contributed for three or more years, may be paid out of the Fund their total contribution but without interest.

By Order in Council P.C.1447, dated 7 August, 1929, this Fund was closed to all new entrants, and employees not already contributors to the Fund are placed in the same category as Canadian National Railway employees under the Canadian National Railways Pension Act.

Grand Trunk Railway of Canada Superannuation and Provident Fund Association

This Association was established under provisions of "The Grand Trunk Consolidated Debenture Stock Act, 1874". The Committee of Management consists of five officers of the Canadian National Railway Company and six persons members of the Fund resident at headquarters in Montreal, to be elected by the members.

Moneys in Fund not required for immediate application are to be invested in such of the following ways as the Committee of Management direct: (1) Dominion Government securities; (2) Provincial

or Municipal Bonds or stock; (3) Grand Trunk Mortgage bonds or debenture stock; (4) Grand Trunk Western Railway bonds; (5) Mortgages on real estate in the Dominion of Canada.

Contributors include: salaried officers, clerks, passenger or freight agents, telegraph operators, roadmasters, inspectors in any department or foremen in mechanical department who were in the service on 1 October 1874, and whose age at that date was 37 years or under.

Contributions by employees to be a sum equal to $2\frac{1}{2}$ per cent. upon actual salary to be deducted *pro rata* in advance from time to time as salaries are or may become payable. At the end of each half-year the Company contributes, out of revenues, a sum equal to the sum which has been contributed by employees during the same period, and such further sum as the Committee of Management, subject to approval in writing of the Chairman for the time being of the Board of Directors of the Canadian National Railway Company, from time to time agree upon, not exceeding one-half of such specified contribution.

Member after attaining the age of fifty-five years may retire and is entitled to an annual allowance for life equal to one-sixtieth for each year of membership of the highest average annual salary received by him for any ten consecutive years of membership, not however to exceed in all forty-sixtieths of such annual salary. No annual superannuation allowance is to exceed the sum of \$10,000 (this was made effective 6 November 1929). The original maximum was \$7,500.

If any member dies prior to superannuation, his contributions to the Fund will be paid to his lawful heirs. If a superannuated member dies prior to having received by way of allowance a sum equal to the amount of his contributions during membership, the difference between such contributions and allowance received shall be paid to his heirs. Any contributing member, in consequence of his services being dispensed with from any cause other than misconduct, fraud or dishonesty, shall receive back all of his own contributions. Members resigning also receive like treatment. Persons dismissed for fraud, misconduct or dishonesty forfeit all contributions and are deprived of any benefit in the Fund at the discretion of the Committee, with the approval of the Board.

This Fund was closed to new applicants on 31 December 1907.

Grand Trunk Railway Insurance and Provident Society

This Society was established in 1885. It was originally compulsory, but is now voluntary. At a cost of \$1.00 for medical examination and approximately 3 $\frac{3}{4}$ cents per day, the Society offers to employees within former Grand Trunk Railway lines territory in Canada a life insurance policy of \$250, payment of all operation, hospital (public ward rates) and medical costs incurred in connection with any sickness or accident, allowance of 50 cents per day after the third day, for duration of disability, up to fifty-two weeks, and life insurance coverage up to \$2,000 at proportionately higher rates.

The C.N.R. contributes to the Society an annual sum of \$12,500 and pays 5 per cent. interest on its Funds.

Statistics

The following statistics with regard to the operation of the various pensions schemes are published by the Company:

"Under the provisions of the Canadian National Railways' Pension Act there were retired during the year 1933 495 employees. The number deceased in 1933, who were in receipt of pension, totalled 246. Total number receiving pension under this Act was 3,250 at the end of 1933.

"Under the provisions of the Grand Trunk Railway of Canada Superannuation and Provident Fund Association, 8 members of the staff were retired during the year 1933. The number of members deceased during the year was 2. The number in receipt of superannuation under this Fund was 150 at the close of the year.

"Under the Intercolonial and Prince Edward Island Railway Employee's Provident Fund Act there were retired during the year 216 members of the staff. The number deceased during the year who were receiving superannuation under this Act totalled 91. The number in receipt of superannuation from this fund totalled 1,661 at 31 December 1933."

The cost of pensions in 1933 was \$3,105,264.

EDUCATION AND APPRENTICESHIP*Apprentice Training*

In 1927, the Canadian National Railway Executive Board appointed a sub-committee to enquire into problems affecting the education of its workers and to present a report on the subject. The sub-committee felt bound to carry its report, in so far as it bore

upon the mechanical department, before the joint system co-operative committee of the railroad when it assembled at Montreal in 1928. The system committee voted approval of the findings embodied in the report, commenting especially upon the value of its proposal that an educational officer be appointed with jurisdiction over the instruction of apprentices on all the Company's lines.

While it advised a continuance of the apprentice training plan already operative in the mechanical department of the Canadian National Railway system, the sub-committee stressed the importance of having uniform methods of instruction at all repair points. The educational officer whose appointment it recommended should, it believed, be responsible for the character of the textbooks authorised and for their revision, whenever desirable. He should also have charge of the preparation of examination papers to be submitted periodically to apprentices in training, and should supervise the marking and correction of them. The report asserted that care should be observed in working out the details of the plan in order that classroom instruction might be made to synchronise effectively with practical shop training. It would be well, however, if the policy of standardising the apprentice training plan on the railway should be undertaken gradually, lest the programme of apprentices already indentured should be disrupted, and textbooks and classroom equipment needlessly scrapped that were still serviceable.

With the object of safeguarding the interests of apprentices enrolled at lesser repair points where classroom instruction is impossible, it has been the practice on the Canadian National Railway system to transfer them to larger points where they are given technical training for a period of two years. For example, at the Stratford, Ontario, locomotive repair shop, a certain percentage of the apprentices come from nearby stations on the line. The Stratford shop is of the "home guard" type, in which 80 per cent. of the workers are property owners. The railroad shop trades are in high repute among the young men of the city, and as a result the shop superintendent generally has a waiting list of 100 or more applicants. At intervals, from eight to ten of these are subjected to tests, on the basis of which two or three are accepted for indenture.

As a consequence of the economic depression, resulting in the laying off of staff, a situation developed according to which apprentices who had completed their training in the Railway's shops could not be taken into the service of the Railway. This was satisfactory

neither to the Company which was spending money training apprentices for other people's service, nor to the apprentices themselves, most of whom desired to enter the service of the Railway. The matter was therefore discussed at the System Co-operative Meeting in January 1932 and it was agreed to refer it to a sub-committee on apprentice training. A survey was also made as to the number of mechanics and apprentices employed on the different Regions before and after the reduction in staff in April 1932. At a meeting of the sub-committee, composed of two officers of the Railway and two officers of the railwaymen's organisations, the report of the survey was submitted, which showed the number of mechanics and apprentices and the ratio of apprentices in each trade, also the number of apprentices that could be employed on a ratio of one apprentice to ten mechanics. After some discussion it was the unanimous opinion that in starting new apprentices this ratio of one to ten would be a fair basis on which to work, and it was agreed to recommend to the Company that new apprentices be started. It was also agreed and recommended that in trades where the ratio was below one to ten, the ratio be brought up gradually, and that when new apprentices were taken into the service, the Co-operative Committee, at the point where apprentices were to be employed, should be informed. The recommendations were forwarded to the Chief of Motive Power and Car Equipment, along with a general plan outlining the number of apprentices that could be employed in each Region. These plans in turn were forwarded to the General Managers for their recommendation.

The plan was finally approved by the Acting President, Mr. S. J. Hungerford, and authority was given to put it into effect on 1 September 1932. From this date until 31 December 1932, fifty-six new apprentices were taken into the service.

In carrying out the plan of starting new apprentices, applications from sons of employees are to be given special consideration, and sons of employees at stations apart from main shops where apprentices are trained will be given special consideration on a fair proportional basis.

In accordance with the original agreement of the Committee on apprentice training, that apprentices be trained at main shops, arrangements have been made to train apprentices at some twenty points.

In centralising apprentice training at these points it is considered that apprentices will get a more thorough training and at a less cost. At small points where apprentices have been trained, it

was not possible to give an apprentice a proper training owing to the limited number of machines and variety of work.

Plans are now made five years ahead with regard to the number of fresh apprentices who will be taken on. It is necessary to plan a long time ahead in order to make sure that only those apprentices are trained who can be taken into the employment of the Company.

Education on the Permanent Way

In 1932 an interesting decision was taken in connection with the vocational education of the maintenance of way staff. It was decided that mimeographed "educational letters" should be prepared at headquarters and distributed to each foreman. These letters deal with questions of everyday practical concern to the permanent way staff. Those issued in 1932 and 1933 have included the following subjects: general information in regard to proportioning and mixing of concrete; best method of eliminating heaving of track; general information in connection with heating systems; the proper care, handling and seasoning of untreated ties; fire prevention; method of killing weeds.

An educational survey made in July 1931 revealed that eighty-two foremen in the Track Department, mostly men over forty, were unable to read or write either English or French. These men were encouraged to improve their education, with the result that about half of them made fair to good progress.

The education of the illiterate amongst the employees has been receiving the attention and consideration of the Executive Council for some time. A revision of the regulations has now been made to provide that no new appointments to permanent positions in the Maintenance of Way Department will be made unless the applicant has an elementary knowledge of reading, writing and simple arithmetic.

Valuable work is also done in the vocational training of future foremen.

The "C.N.R. Magazine"

In the field of education, special reference must be made to the *Canadian National Railways Magazine*. This is a well-illustrated and admirably produced monthly magazine, issued for circulation among the employees of the company and the general public. The magazine contains, in addition to articles and stories of general interest, special articles and news of special interest to the employees

of the company. For example, a recent issue contains an address by Mr. S. J. Hungerford, now President of the Company (then Acting President) on the subject of the Railway's unique position in the field of transportation. Realising that they have a definite place that no other form of transportation can fill, the railroads, Mr. Hungerford points out, are "concentrating their efforts upon doing their own job". Articles of special concern to employees in recent months take up such matters as the locomotive and the air brake and treat of them in accurate but readable style; give reports of technical developments on other railways; explain the work of departments within the Canadian National system; remind the readers of early railroading problems. A good deal of interest was occasioned by a special series of articles on British railways by Mr. C. E. R. Sherrington, Secretary of the British Railway Research Service, in which some comparisons were made with Canadian methods. "News Notes" from various points on the system deal with appointments, promotions and retrials, social functions of the staff, and athletics and other recreational activities.

In the case of such a far-flung railway, a magazine of this kind clearly performs a very important function in encouraging collaboration and *esprit de corps*.

ACCIDENT PREVENTION

Active collaboration takes places between the management and the personnel with a view to the prevention of accidents. Committees on which the workers are represented deal with questions of safety and rehabilitation; and accident prevention also forms an important part of the work of the Committees set up under the Joint Co-operative Plan, which have now in fact assumed the duties of the previously existing Safety First Committees and Fire Prevention Committees.

The ultimate responsibility for accident prevention is in the hands of the C.N.R. Safety Council. This body, under the chairmanship of the President, consists of the general managers or other leading officers of the various departments of the Railway, viz. operating, legal, traffic, purchases and stores, hotels, express, telegraphs, medical and publicity. It also includes three representatives of the general chairmen's organisation, which is the organisation of chairmen of the railwaymen's unions. The Safety Council has created certain special Committees to deal with

particular problems in the field of accident prevention, for example, protective goggles. It has also provided for the establishment in the various departments of the Railway of permanent safety Committees consisting of representatives of the management and of the staff, with a view to preventing accidents and maintaining the highest possible standard of safety in all departments of the Railway.

Early in the year 1931 the Safety Council decided to abolish the existing Safety First Committees at all main shops, round-houses and car repair points where Co-operative Committees were functioning, and to assign the work of the prevention of accidents to the Co-operative Committees. Arrangements are made that in each of these Co-operative Committees four times a year a thirty minutes' talk is given on some aspect of accident prevention. Every effort is made to interest, not only local superintendents and foremen, but also each railwayman, in the details of accident prevention. While the management has endeavoured to make machinery and physical conditions as accident-proof as possible, emphasis is laid on the value of the suggestions of employees offering for their supervisory officers' consideration ideas towards the elimination of apparently unsafe conditions and recommendations covering the installation of additional safeguards to ensure greater safety.

With a view to obtaining suggestions from employees a suggestion scheme was inaugurated and forms are available for all employees on which they indicate an apparently unsafe condition or practice and make suggestions for its correction. Suggestion boxes are available at convenient points, and employees' suggestions may be anonymous or signed. Superintendents or heads of departments in their turn make a monthly report to headquarters of unsafe conditions and practices reported and corrected.

The administration of accident prevention is in the medical department, and, under the general direction of the Chief Medical Officer, in the hands of the Director of Accident Prevention. The function of the Director of Accident Prevention is, under the jurisdiction of the Chief Medical Officer, to furnish expert technical advice to the Safety Council on all matters pertaining to safe practices, safety standards and the formulation of policies governing the conduct and administration of accident prevention throughout the system. Under the Director of Accident Prevention regional safety inspectors are appointed to investigate accidents and periodically inspect the Company's property, reporting all unsafe

practices and conditions to the chairman of the appropriate local Safety Committee and to the Director of Accident Prevention.

The medical statistician is, under the jurisdiction of the Director of Accident Prevention, responsible for the operation of the statistical plan necessary in the administration of accident prevention, and for furnishing the Safety Council and local Safety Committees with reports indicating the frequency, severity and causes of accidents throughout the system.

A special bulletin is issued known as the *C.N.R. Accident Prevention Bulletin*, which contains articles by leading officers of the Company and also by representatives of the labour unions on various aspects of accidents prevention, includes statistical tables with regard to the severity and frequency of accident in the various regions, districts or divisions of the Railway and contains practical advice with a view to the avoidance of accidents. The first number of the *Bulletin*, for example, contained an article by Mr. Hungerford, and by vice-presidents, general managers, superintendents and other officials.

HEALTH

Special attention is paid by the Canadian National Railways to the health of the employees. Under the supervision of the Chief Medical Officer, arrangements are made for preliminary and periodical examination of employees, for treatment at the various treatment centres and in emergency hospitals located throughout the system, and for thorough instruction in first aid.

Medical Examination

All new employees, for whatever department intended, are required to pass a medical examination before being employed. All employees on reaching the age of sixty-five must pass a medical examination for extension of employment. Further, certain categories of employees are required to pass periodical medical examination. Thus, all drivers, firemen, conductors and brakemen are medically examined every three years till the age of fifty, every two years from fifty till sixty-five, and every year thereafter. All employees who handle food or attend to bedding, cooks and waiters in hotels and restaurant cars and sleeping-car porters, are examined every three months. Such regular medical examination is imposed in the interests not only of the employees themselves but also of the travelling public.

The Treatment Centres

The Treatment Centre in Montreal was opened in June 1928 by Sir Henry Thornton. In declaring the Treatment Centre open, Sir Henry stated: "This is a new step in the progress of the Canadian National Railways which has for its object the assistance of those loyal men and women, officers and employees of the system, who have given such wonderful support and co-operation in the operation of the National Railways."

In connection with the treatment centres small emergency hospitals were opened at the Point St. Charles Shops, Turcot Roundhouse, the offices in the Belgo Building, on St. Catherine Street West, and the Canadian National Telegraphs, all under the care of fully trained nurses, with a doctor visiting each one daily for consultations, treatments and instructions.

The treatment centre includes a number of rooms similar to those in the outdoor department of a large modern hospital.

On one side is located a women's examining room, containing a bed, table, chairs, examining light, weighing machine, blood-pressure apparatus, wash basin, and various other necessary appliances. Next to it is a modern dispensary, fully equipped with all modern requirements, and presided over by an experienced dispenser who fills several hundred prescriptions a month; and in addition to this work the dispenser keeps the other emergency hospitals supplied with stock mixtures, lotions, and medical supplies, makes daily analyses, etc.

Then comes the X-ray room, in charge of a trained nurse. This room is equipped for taking radiographs and fluoroscopic work. Most of the radiographic work is for fractures and teeth, although X-rays of the body cavities, heart, lungs, etc., if required, are also taken.

Next to the X-ray room is the operating and surgical dressing room, which, naturally, is the largest room in the service, containing, besides the modern operating table, an instrument case fully equipped, a large basin with hot and cold running water controlled by foot pressure, a sitz bath, solution basins, a dressing table completely equipped, a special examination and treatment chair with upright light for eye, ear, nose and throat work, screens, and a dressing and splint cupboard. Off this room is a small private wash room. All of the surgical work of the treatment centre is done in this room-minor operations, either with general or local

anaesthesia, ordinary surgical dressings, applications of plaster casts, and the ordinary everyday work of a surgical outdoor department.

Across the main office and opposite the operating room is a special consulting room used for the treatment of nose and throat cases, as well as for special examinations for vision, colour sense and hearing. A specialist in diseases of ear, nose and throat attends one afternoon a week for examination of cases requiring his attention. Similar arrangements have been made in regard to consultant specialists in diseases of the eye, in general surgery and in internal medicine. In cases where such specialists' services are given, no charge is made to the patients for them. The consulting room is equipped with specialists' examining chairs, instrument tables, lights, and other necessary apparatus used in these cases. The room can be darkened as necessity demands in examining patients in regard to vision and colour sense.

Next to this room is a men's examining room, equipped similarly to the one previously described; and, finally, the doctors' office, containing everything necessary for their work.

Between the doctors' room and the rest room is the entrance direct from McGill Street, through which are admitted the ambulance cases and most of the walking cases. Beneath the rest room and the waiting room are store rooms for medical and surgical supplies.

In addition to the staff mentioned in the foregoing, which render service in the administration of the clinic, there is a doctor in attendance from 9 a.m. to 1 p.m., and from 2 to 5.30 p.m., two doctors each are on duty for half the day, and a third doctor is on full time duty who devotes his time to the work of the four emergency hospitals and such other special work as is from time to time assigned to him. There is also a trained nurse on duty all day, who assists the doctors in turn, looks after instruments, dressings, prepares patients, and is continually occupied just as is a nurse of an outdoor department of a hospital. The staff is completed by a record clerk and translator, and a stenographer. There is also a trained first-aid attendant on duty, from 5.30 in the evening to 8.30 in the morning, to render emergency first-aid services in all cases of accident occurring at night.

Each case coming to the treatment centre is given one of four cards; for physical examination, for employment or insurance, (a) male and (b) female, for illness or for accidental injury to an employee. Each card is filled in with the name and address and

other necessary particulars about the patient, and in the case of illness, or accident, the history, results of examination, including X-rays, diagnosis, and treatment are all recorded and subsequent treatments and results noted. The card is then filed for future record, or for statistical purposes.

After these cards are filled in, the patient remains in the waiting room until called for his examination by the doctor on duty. He is assigned to the surgical dressing room, to the X-ray department, to the physio-therapy room, or to have a prescription filled, as may be required.

If the condition necessitates indoor hospital treatment, arrangements are made therefor, and, if necessary, the patient is sent in the company's ambulance to the hospital, or to his home, as the doctor decides. If the case presents unusual difficulties, but does not necessarily require indoor hospital treatment, a consultant in surgery and another in medicine are at the disposal of the doctor on duty and the patient is sent to one of them after the necessary arrangements are made, with full particulars of his complaint and the doctor's original examination. If the case requires an eye or a nose and throat specialist, arrangements are made to cover each individual case.

In enlarging the medical service, the Chief Medical Officer saw the necessity of establishing a laboratory, which, in addition to dealing with matters usually undertaken in laboratories associated with hospitals and directly connected with the health of the employees, also renders as special service to those who use the trains, steamships, hotels, restaurants and summer resorts each year, by examining and testing water supplies, milk and other food supplies.

The medical treatment centre, as described, is only part of the activities of the Medical Department, which by degrees, as the staff and equipment may be secured, is continually branching out, so that eventually the whole system will be taken care of from a medical point of view, and the employees at the main centres on the system, between Halifax and Vancouver, will be in a position to receive the same attention as those located at Montreal. Up to the present time, centres have been established at Toronto and Winnipeg, in addition to the main centre at Montreal.

It is intended to establish similar treatment centres at other important points on the railways.

First Aid

First aid receives particular attention on the Canadian National Railways. The work commenced on the individual lines of the Canadian Northern and Grand Trunk in 1909. In March of that year the first first-aid class was organised on the Grand Trunk Railway, at the Point St. Charles Shops, Montreal, and it had twelve members. Canadian National First-Aiders number thousands to-day and they are found in every part of the system, in every department of the railway, studying, passing their St. John Ambulance Association examinations, practising, and whenever called upon to meet an emergency they are ready.

The administration of first aid is, under the general jurisdiction of the Chief Medical Officer, in the hands of the Director of first aid. Under the Director come the regional organisers, one for each of the four regions in which the railway is organised. The regional organiser is responsible for conducting classes in first aid in his region, giving each class a course of sixteen lectures of one hour each. Regional organisers used to have instructors to assist them, but at present the only instructor in service is a French-speaking instructor in the Central Region. A film on artificial respiration is used in instruction, and two films on fractures are under consideration.

Each qualified certificated First-Aider is supplied with a copy of the 38th Edition of the *St. John Ambulance Association Handbook*, either in French or in English. First-aid kit is placed in all passenger cars, dining cars, sleeping cars and observation cars on the system. It is ultimately intended to supply with first-aid kit all guards' vans and locomotives.

In 1930 the first first-aid instruction and emergency hospital car was put into service. Half of each car, a length of 30 feet and floored with linoleum, composes the lecture room. At one end is a platform with blackboard, regular first-aid charts and moving picture screen for the demonstration of first-aid methods. It has space for fifty pupils and the seats are collapsible, so that the floor may quickly be cleared for stretcher drill.

A unique feature of the car is the miniature hospital. It is complete with an operating table, a bed which folds down from the wall, a chair for minor operations, instrument table and steriliser, and a host of other appliances. It is fitted with a special storage battery to ensure the best of lighting at any time, anywhere. Should an accident occur for instance at some isolated plant on a northern stretch of line, a doctor and nurse could be put aboard

the car and rushed to the scene. The convenience of taking a hospital to a patient unable to stand a train journey over a long mileage can be easily appreciated. For minor injuries, the car is equipped with a variety of appliances necessary to the first-aid craft. Should a case of contagious disease break out in some settlement or camp, ill-equipped to cope with an epidemic, the sick person could be moved to the car and isolated there, and the settlement relieved of any threat to its welfare.

It was intended that each car, in charge of a competent instructor, should be sent to divisional points, to remain until such time as all available employees had received a full course, after which the cars would proceed to points that had not previously had the benefit of first-aid instruction. In this way, the Medical Department would reach, for the first time, enginemen and trainmen, agents and section workers, isolated from medical care and the ordinary channels of first-aid instruction.

These cars have rendered excellent service, both in instruction in first aid and as emergency hospitals. At present, however, owing to the necessity for economy, they are not in regular use, but are held in readiness for any emergency that might require their service.

Rehabilitation

When employees suffer accidents or have an illness which results in some physical condition rendering it impossible to continue to employ them on the jobs they previously had, every effort is used to find for them other suitable employment in their own departments. If this should prove impossible, endeavours are made to find for them employment in some work in which their physical infirmity will not constitute a serious drawback. To facilitate such rehabilitation, a Rehabilitation Committee has been set up, including representatives of the railwaymen's organisations. This Committee has done useful work in the rehabilitation of disabled employees.

CONCLUSION

In the development of industrial relations on the Canadian National Railways it has been necessary, as the preceding pages must have made clear, to cope with two very great difficulties.

One of these difficulties resided in the diversity of conditions and of traditions in the various companies which were combined to form

the Canadian National Railway system. Methods of management differed, methods of payment differed, conditions of employment differed, provision for old age and sickness differed—and this list of differences could be almost indefinitely extended. Out of this diversity it was necessary to create unity of aim and community of purpose; it was necessary to achieve a real team-spirit on the part both of management and of men.

The second great difficulty in the way of the development of industrial relations was to be found in the far-flung character of the system. Its total mileage is very great, and this mileage is spread over an immense area, with long distances between focal points. This results in a necessary scattering of personnel, which, in its turn, gives rise to special problems of control and co-ordination.

Under these special circumstances, the institution and development of a unified system of industrial relations is a tribute both to the management of the Company and to the railway unions. Without mutual confidence between the principal officers of the Company and the leaders of the railway brotherhoods it would have been impossible to inaugurate the special features of the Joint Co-operative Plan. And it would have been impossible for this plan not only to develop during years of prosperity but also to weather years of adversity without the day-to-day loyal co-operation of all grades of the personnel.

The Pequot Mills of the Naumkeag Steam Cotton Company, Salem, Mass., U.S.A.

THE HISTORY, SCOPE AND NATURE OF THE MILLS

The mills of the Naumkeag Steam Cotton Company are situated at Salem, Massachusetts, U.S.A. An interesting feature of the company's annals is that in its inception and at critical stages in its history it has been essentially influenced by international conditions. To a complex of international circumstances was due its original establishment in 1839.

At the beginning of the nineteenth century Salem was a prosperous shipping town. But the embargoes and blockades of the Napoleonic wars dealt a blow to the shipping of Salem from which it never recovered. During the embargoes hundreds of ocean-going ships lay rotting alongside the wharves of the historic town, with their seamen scattered wherever employment could be found. Many old and famous concerns went out of business, or transferred their affairs to the rapidly growing town of Boston, or the already outstanding city of New York. The shipowners, shipmasters and merchants of Salem began to look about for other investments. Their attention was naturally drawn to the new and successful industry of cotton spinning and weaving, as carried on along the Merrimac and Charles Rivers in Massachusetts and in the Blackstone Valley in Rhode Island. The result of their investigation was the establishment, in 1839, of the Naumkeag Steam Cotton Company on the harbour front.

Naumkeag has never had an undue respect for tradition, and both its location and its source of power constituted, when it was founded, a break with convention. At that time, cotton mills were always situated on the banks of water-courses, for two reasons. In the first place, the water-wheel supplied the necessary power for the mill, and in the second, the river valley produced the humid atmospheric conditions essential to the successful manipulation of cotton fibre. The founders of the Naumkeag Company believed,

however, that coal would generate power more cheaply and efficiently than the water-wheel, and that the necessary humidity would be obtained from proximity to the sea. Their calculations proved correct, and the Company continued to operate successfully until 1914, when the entire plant was completely destroyed by fire.

Again the fortunes of Naumkeag were bound up with world events. The plant was entirely rebuilt on the same historic site¹, and by the end of 1915 the new Naumkeag was in full operation. Rebuilt at pre-war scales of costs, it was ready, with completely new construction and machinery, but with mature experience, to take advantage of the immense boom in the cotton textile trade produced by the World War.

The Naumkeag mills, as they stand to-day, are of improved reinforced concrete construction, special attention having been paid to the details of light, ventilation, sanitation and everything contributing to the well-being of the operatives. The weaving shed, covering 9 acres, is claimed to be the largest of its kind in the world. The machinery is of the latest design, largely automatic and electrically driven. Although none of this equipment dates from earlier than 1915, the management has already made large replacements, and consistently throws out old machinery as fast as more efficient or more economical machines are tested and proved.

The main product of the Naumkeag Company's mills is plain sheetings and pillow-cases, known under the trade name of Pequot. The Naumkeag Company has, in fact, always specialised in plain sheetings. Even in the first year of its operation it was awarded a medal, at the Annual Exhibition of the Massachusetts Charitable Mechanics' Association, for the excellence of its products. As early as 1860 the mills began to pay special attention to the weaving of wide sheeting. Many years ago they initiated the custom of supplying housewives with bed linen made up ready to use, and a large proportion of their output is marketed in this form.

The capital of the Naumkeag Steam Cotton Company amounts to \$6,000,000. During the years of prosperity large reserves were built up, which amounted on 30 November 1930 to over \$3,600,000. In the succeeding year, however, a net loss of some \$50,000 was registered, and dividends, although not earned, were continued throughout the year, with the result that the surplus was reduced

¹ Just opposite the water-front is the famous Derby Wharf where East India merchantmen used to unload, and a few hundred yards away is Nathaniel Hawthorne's "House of the Seven Gables".

on 30 November 1930 to below \$3,200,000. The quarterly rate of dividend of \$2.00 per share was reduced to \$1.00 per share, beginning with the October 1931 quarter.

Production and sales have been well maintained since 1928, although in that year a heavy fall occurred from the peak year of 1927. The actual figures are as follows:

PRODUCTION AND SALES, 1927-1933

Year	Production		Sales	
	lb.	yds	yds	\$
1927	19,888,984	32,328,371	30,766,299	10,583,100
1928	13,017,464	20,945,905	20,397,142	7,273,535
1929	12,908,725	20,836,475	21,058,163	7,887,608
1930	12,692,542	20,086,821	20,335,881	7,162,267
1931	12,248,393	19,601,887	19,460,503	5,895,004
1932	11,382,328	18,240,630	18,466,223	4,184,758
1933	10,221,100	16,363,318	16,744,588	3,811,826

The undertaking is governed by a Board of seven Directors, the President of which is Mr. Henry P. Benson, and the Managing Director, with the title of Agent, Mr. J. Foster-Smith. The Agent is responsible to the Directors for the management of the mill, and has under his orders three superintendents, each responsible for one of the three main divisions: spinning, weaving and maintenance. Under the superintendents are overseers, each responsible for one of the ten operating departments of the mill.

During its long history Naumkeag has naturally drawn its workers from many sources. When it began operation, it started with a nucleus of trained spinners from England and Scotland, but the majority of the workers were native born and residents of Salem. It will be remembered that the mills started work when the other industries of the town were suffering from depression, and a reserve of workers who had been thrown out of employment in their previous occupations was therefore available. In addition, as has always been the case in other countries at the beginning of the development of the cotton textile industry, many girls came in from the country to work in the mills. After a few years, however, waves of immigrants began to flood the country. The Naumkeag mills were well situated to absorb this immigrant labour, and the native American workers gradually left the mills, attracted

to other occupations. In the sixties, the workers were chiefly Irish, but after a few years they too passed into other industries.

The present workers consist largely of the descendants of two other immigrant streams, the French Canadians, who began to come to Salem in the seventies, and the Poles, who arrived in the two subsequent decades. In the last forty years, therefore, the working population of the mill has been remarkably stable. Many of the workers own their own homes in Salem, and their horizon is largely limited by the life of the mill and their immediate surroundings. The number of workers in April 1933 was about 1,293, 575 males and 718 females.

THE HISTORY OF INDUSTRIAL RELATIONS

In the very early years industry relations in Naumkeag were marked by paternalistic and even theocratic conceptions. The corporation controlled rigidly not only conditions in the mill but also conditions outside. The mill bell rang a curfew at nine o'clock every evening, as an intimation that everybody must then be off the streets. And on Sunday all mill employees were obliged to attend church.

Soon, however, the attempt to control the conditions of life of the workers outside the mill was abandoned. It became obviously impossible to do so when the employees were no longer recruited largely or exclusively from Puritan New England homes, but were of different nationalities, different religious beliefs, and different manners and customs.

Control of conditions within the mill, on the other hand, continued to be paternalistic right up to the war years. This control would appear to have been on the whole benevolent and free from a dictatorial spirit. In any case no serious collective divergence of opinion between management and workers occurred until 1918, eighty years after the establishment of the company.

The last year of the war and the first of the peace were periods of industrial strife in all countries, and Naumkeag did not escape. In June 1918 a strike occurred in the Naumkeag spinning and carding department, employing 300 workers. A local Union was organised and chartered in the United Textile Workers of America, affiliated to the American Federation of Labour, and machinery for dealing with the management was established. Agreement was reached at the end of five days to return to work and submit the

entire controversy to arbitration under the auspices of the Massachusetts State Board of Arbitration.

In the autumn of 1919, 75 per cent. of all workers were members of the Union, and demanded its recognition with collective bargaining in its fullest sense *plus* a general increase in wages. After a seven weeks' strike, a conference was called, and the management and Union officials agreed upon: (1) recognition of the Union; (2) a minimum wage for women; (3) collective bargaining; (4) withdrawal of the demand for a wage increase; (5) a system of collecting union dues within the mill; and (6) the establishment of a shop committee and foreman conferences to adjust grievances.

In neither of these disputes was there any resort to violence or to measures of which either side might subsequently feel ashamed. The Agent of the Company closed the plant on both occasions, and did not resort to injunctions, "yellow-dog" contracts, or other methods of strike-breaking. The strikers on their part adopted a responsible attitude, and sought through conference and not through violence to make their point of view effective.

With the resumption of work began a closer co-operation between employer and employee, and a united effort for quantity and quality production. Added to this was a sincere effort on both sides to eliminate, or at least alleviate, the causes of friction, misunderstanding and resentment. Next followed an agreement to accept seniority rule as a means of still further improving morale. It is believed on both sides that honest effort in quality and quantity production is rendering faithful service, and is entitled to reward in the form of promotion as well as in security of job.

A further extension of the co-operative spirit came about when the management and the Union, through their legally qualified officers, signed in 1927 an agreement, the main object of which is the removal, as far as possible, of all causes of misunderstanding and friction, and the promotion to the greatest possible degree of mutual helpfulness between the two organisations.

The agreement recognised the desirability of trade unions; pledged the co-operation of employees in effecting such economies in manufacturing as may be brought about by the introduction of improved machinery; provided for a proper and orderly holding of conferences in the event of differences which may arise in the natural course of the operations of the mill and bleachery; and further provided for regular meetings between the management and the representatives of the Union.

In view of the importance of this agreement in the history of

industrial relations in the undertaking, it is necessary to quote it *in extenso*:

AGREEMENT by and between the United Textile Workers of America, through its legally qualified officers, party of the first part, and the Naumkeag Steam Cotton Company, of Salem, Massachusetts, through its legally qualified officers, party of the second part, with the object of removing, as far as possible, all causes for misunderstanding and friction and of promoting to the greatest possible degree the mutual helpfulness of the two organisations.

First: The party of the second part agrees to a cordial and full membership recognition of the *bona-fide* trade unions of its employees, known as party of the first part, as their proper agents in matters affecting their welfare, and further agrees that these trade unions are acceptable. It recognises them as desirable, not only in regard to the welfare and protection of their members, but also desirable to the management, inasmuch as the co-operation of their members is essential to the continued and successful operation of the Mills.

Second: The party of the first part agrees to promote in every legitimate way the distribution and sale of "Pequot" sheets and pillow cases, and other products of the party of the second part, and pledges its support in a constructive and responsible way to the end that quantity and quality production may be maintained, and further pledges its co-operation in effecting such economies in manufacturing as may be brought about by the introduction of improved machinery.

Third: The party of the first part, realising that continuity of operation is essential to the successful operation of the Mills, agrees that in the event of differences which may arise in respect to details of operation, compensation, hours of labour, working conditions, or any other matter of controversy between the management and the employees, a period of not less than sixty days shall be allowed for the proper and orderly holding of conferences between the management and the executive or other committee of the Union, and further agrees that no action tending to disrupt production shall be taken before the expiration of the said period.

In the event of the unauthorised cessation of work by an employee or group of employees the said party of the first part agrees to use every effort at its command to assist in maintaining continuous operation.

Fourth: The party of the second part, appreciating the advantage of a spirit of co-operation and loyalty inspiring the personnel of its employees, and desiring to further cement the feeling of friendly and sympathetic understanding, agrees to use every effort to maintain good working conditions, fair wages and continuity of employment.

Fifth: Representatives of the party of the first part shall meet with the representatives of the party of the second part at regular intervals, preferably once a month, or as often as necessity may require, for the discussion of any questions that may arise and for the further extension of a spirit of loyalty, helpfulness and co-operation.

Sixth: This co-operative agreement is binding upon both parties in spirit as well as in letter, and shall be changed only by mutual agreement, after notification in writing, served by either party upon the other at least sixty days before such change is to become effective.

Seventh: This agreement shall be operative for the period of one year from date of acceptance, and either party may withdraw from this agreement on sixty days' notice.

This agreement continued in operation, unchanged, until 1933. With this joint machinery in force, monthly conferences started to discuss competition in manufacture, sales and markets, quality and quantity production, regularisation and continuity of employment, technical changes and economies to be effected through new and improved machinery.

In 1928 the management considered that it was essential to reduce costs of production. This was a period of intense competition in the cotton textile industry, when the New England companies were threatened with extinction as a result of the rapid development of the mills of the Southern States, operating close to the sources of supply of the raw material, with the most modern automatic machinery and with cheap labour.

The management of the Naumkeag therefore brought to the attention of the Executive Committee of the Union the fact that the Naumkeag, owing to the lower costs of its competitors, was put to most serious disadvantage in marketing its product, and that its costs of production must be brought to a figure comparable with mills making an identical line of goods. To this end the management, believing an undertaking can prosper and give employment to its workers only to the degree to which it is economically in balance with industry as a whole, presented a new schedule of labour and wages. This schedule provided for a rearrangement of work in every department, and inevitably involved the elimination of a considerable number of operatives. On the other hand it provided that no wages would be reduced. In other words, this reapportioning of jobs in each case carried with it an increase in pay, and stressed the further belief of the management that no employee doing a fair day's work should have any addition made to his task without some commensurate improvement in working conditions. The schedule was worked out by the supervising executives from their intimate knowledge of the jobs, and not by factual tests.

Several conferences were held between the management and the Union, but it was difficult to reach agreement. The Union recognised the necessity of a reduction in costs, but was reluctant to accept without further examination the programme of the management. The Union then took an interesting and unusual step. It consulted Mr. Morris L. Cooke, management engineer of Phila-

delphia. It then presented to the management a counter-proposal. It agreed that cost reduction was desirable to safeguard its employer, and thus its own status. It agreed that proposals of the nature suggested by the management would accomplish the result. But it pointed out that they should not be adopted wholesale, because of the effect on employment. Furthermore, detailed study of each suggestion was desirable. Why not employ an engineer, to be selected by Mr. Cooke, who could make analytical research into each process, recommend standards of performance in accordance with experimentally ascertained facts, and discover new possibilities of waste elimination?

The management agreed to this proposal, and Mr. Francis Goodell was employed by the Union and with the consent of the mill management made a fortnight's survey of the whole situation of industrial relations in the mill.

As a result of this survey, the Union submitted to the management, in January 1930, a series of proposals relating to the new schedule suggested by the management, and providing for the employment by the Company of a trained technician, and for the appointment of a committee representing the management and the Union to act with him in the making of tests on a factual basis. The object of these was the elimination of waste—both of labour and of materials—and an ultimate reduction in cost. The proposal further provided for master planning on the part of the management, for the budgeting of sales and for the forecasting, as far as is humanly possible, of continuous operation.

In detail, the Union proposed that each question under discussion should be settled separately and upon the basis of analytical research. It was believed that this analytical approach would not only settle the points at issue, but would supply elemental facts leading to other forms of economy, aid in the selection or rejection of new equipment, and, above all, give practice to both parties to the agreement in discussing upon a factual basis matters at issue.

This research work would be headed by a technician employed by the Company. The Union was prepared to accept someone recommended by Mr. Morris L. Cooke as having the requisite viewpoint.

It was also proposed that the existing machinery for discussion should be supplemented by a Committee on Waste Elimination. This Committee would act, or appoint individuals to act, to give assistance to the above-mentioned technician, and have the power to review the facts leading up to decisions relating to manufacture

recommended by the technician. The Committee confined itself to such constructive proposals, under provisions somewhat as follows:

The parties to this contract (or agreement), recognising their common stake in eliminating waste, and realising that wasteful practices generally result, not from intention but from lack of common understanding of such practices and their injurious effect upon both earnings and wages:

Hereby agree to set up a joint research committee composed of three (four or five) representatives of the management and three (four or five) representatives of the Union, whose duty it shall be to ascertain the facts and to devise methods of co-operation for the elimination of waste and the improvement of working conditions as related to quality and quantity of production. This research committee shall in no case entertain complaints or grievances, but shall concern itself exclusively with constructive suggestions for the promotion of the common interest of the parties signatory to this agreement in eliminating waste.

The Committee should be furnished, in the view of the Union, not only with relevant figures obtained by research but also with information concerning the major cost and quality problems arising from competition which confront the management. Although the employees might at times realise that the costs must be upon a sound basis, they did not have any way of knowing the effect of their output upon the costs. There was a psychological need for concrete and immediate facts of this nature if habits of economy and pride in achievement were to be further developed.

This procedure, first of research and second of joint factual consideration, would furnish the machinery for sufficiently frequent and constructive discussions.

Master planning. — The Union realised that the elimination of waste in its several forms was partly dependent upon other considerations than the provision of adequate machinery for constructive discussion. They could not indefinitely continue to endorse a programme which would reduce the labour requirements per unit without reasonable assurance that the sales problem was being met in the same forward-looking and resourceful spirit. They were concerned about distribution at a time of unprecedented change in this field. They could co-operate fully upon the basis that, humanly speaking, future sales were under control, and that plans were made ahead for preventing sudden drops in production due to failure to forecast sales, and to co-ordinate the forecasts with the labour requirements in terms of the immediately succeeding years.

If the necessary sales planning to give assurance to the employees

did not already exist, this lack should be the major concern in order that the place of "Pequot" in the market might not be injured by the many powerful changing elements in the field of distribution—the increasing chain-store development, the general dissatisfaction with and review of present sales methods, the introduction of new basic fabrics and the intensive study of product design.

Unemployment reserve. — It was considered by the Union that if sales planning were adequately carried out, it should become possible for the management to develop plans running at least a year or two in advance, to provide for an unchanged or an increasing staff coupled with a decreasing cost. The Union felt that steps should be taken to work out a financially sound unemployment reserve fund. They did not insist that this fund be started immediately, but believed that with a competent sales planning function, which is integrated with the other administrative functions of financing, buying, manufacturing and planning labour requirements, such a fund would not be a drain upon the Company. On the contrary, it would give two vitally important benefits: first, it would provide a valuable stimulus to continuing and far-sighted sales administration, and second, it would liberate an unprecedented degree of co-operation.

In addition, such a fund should not mean a heavy outlay. With a highly effective control of the distribution problem, the amount expended might be relatively small. And the financing could be made conservative by limiting the amount of liability to the amount of the reserve.

To sum up, the Union believed that the Company could supply conditions which would cut waste in line with their proposals by supplying the machinery for constructive discussion, by getting and giving out the facts relative to the cost requirements, and supplying in some way the confidence that lower costs would not only work to the ultimate benefit of all concerned but that readjustments within the Company, or from the Company to other companies, would be made in conformity with the practical needs of the employees.

The management agreed to these proposals, and, on the nomination of Mr. Morris L. Cooke, Mr. Francis Goodell was retained by the Company to undertake, in co-operation with management and workers, the necessary technical study.

WASTE ELIMINATION AND JOINT RESEARCH

The co-operation of management and workers was ensured, in the first place, through two pieces of joint machinery: the Waste Elimination Committee, sometimes called the Research Committee and the Research Staff. The Research Staff were all on the Waste Elimination Committee, but, unlike the others, they gave full time to research work. The Committee was called together occasionally for advice and review of findings and as an additional medium for getting information from and to the body of employees.

The Waste Elimination Committee was composed of nine members. Its Chairman was the Technician. The Technician was paid by the Company, but the choice had to be approved by both parties to the agreement. The management members were appointed—the acting Superintendent, the Plant Engineer, an overseer, and an official who was at one time night superintendent. The Union members were the presidents of the two Locals—the United Textile Workers No. 33 and the Loom Fixers' Union No. 30—and two other members, one of whom was changed in accordance with the operation under discussion.

There were two ways in which the activities of the Waste Elimination Committee were spread among the rank and file. The best was the informal method whereby the Committee members were regularly and most of the time available for questions by the rank and file. The other was by means of posted notices telling about the meetings. The Chairman prepared minutes of the meetings; the Company had them mimeographed, and then they were posted on the bulletin boards. Other copies were given to the interested parties for record.

The Research Staff consisted of the Technician, assisted by two of the Union members of the Waste Elimination Committee, and a similar number of Management members, all of whom were paid by the Company.

The work done by the Committee and Staff consisted principally in an analysis of various jobs with a view to ascertaining the practical possibilities of increasing the number of machines to be tended by each operative.

The problem of increasing the number of looms per operative has recently become an issue not only in the East and South of the United States, but also in the countries of Europe. It has become an issue mainly because of the installation of more perfect

looms, the organisation of better maintenance, and the institution of better operation control.

The number of looms per weaver was formerly limited by the frequency of stops and breakdowns which necessitated the weaver's attention. But with better maintenance of the machinery and operation control, the number of stops is reduced, and more looms per weaver are possible. How many he can tend depends not, as before, upon the emergency work he has to do, but on the incidental work. Some of this may be delegated to others. Some requires the skilled hand of the weaver. To make new adjustments of work which really aid efficiency instead of injuring it requires careful study.

If the given looms have a large number of unexpected stops per hour, naturally the weaver has to be on hand to provide for these emergency breakdowns. If he has to be on hand ready for an emergency, then he might as well do the incidental work around the loom while he is waiting, because this incidental work can be set aside when the emergency comes. Incidental work consists of cleaning the looms, taking out the finished cuts of cloth, "burling" the battery end of the cloth and oiling. These things do not have to be done on the instant. Therefore the weaver has until recently cleaned his looms and performed most of the incidental work. In recent years, however, the art of maintenance has taken a great step forward. It has been learned that there is an emphatic economy in prevention of these breakdowns, in periodic inspections and renewals. As a result the "end breakage" is much lower. Now that the end breakage is low, the unexpected stops are almost negligible, and the weaver need no longer be assigned looms on the basis of serious trouble. He can, therefore, handle more looms. How many more depends upon whether he is still to do the incidental work around the loom. Some of this incidental work really requires help as skilled as the weaver himself. But some of it, such as cleaning, can be done by a less trained and experienced worker, and at a lower wage cost. The cleaner can become expert—intensively trained in that single operation and equipped with tools well adapted to that one special job—and the other advantages of division of labour can be enjoyed.

A great many companies have tried to make extensions, i.e. to increase the number of looms per weaver, without improving and controlling the end breakage. They have usually failed to maintain their new standards. Others have made extensions

without specialisation by virtue of their improved maintenance.

The joint research work undertaken in this field of job analysis in the Naumkeag Company was organised as follows.

After an operation had been decided upon for study, Union delegates and the Overseer in the room concerned jointly selected a number of so-called "average" operators for study. In addition to the joint selection of operators to be studied the tentative standard practices which were to obtain while making the tests were reduced to writing. More often than not these standard practices had to be changed as the studies threw light on the fact involved. For example, the interval which should elapse between examinations of the cloth on the looms is a matter of quality and cannot be set without the approval of those in touch with sales problems. But the similar interval in the spinning room is a simple matter of economy which can be determined without difficulty by a couple of tests. When the tentative standard practices had been put in writing, the Union representatives went over them with operators in touch with the operations. There was not infrequently some valuable complaint or suggestion in regard to this standard practice.

When the standard practice was ready for adoption, the Union member went to the operator, or operators, to be studied and told him the purpose of the study, and explained the value of Union protection in the study and the importance to him and his colleagues of telling the Research Staff of the difficulties which the operator was likely to be "up against". In this way, the co-operation of the employee was usually obtained in a shorter time, especially when that operator became convinced that a thorough study was to be made.

There were two sorts of studies. There were the formal tests of the machines in the exact way that they are to be manned and operated in accordance with the Company objectives. These were called "critical" tests. On some other tests more empirical methods were used, learning what standard practices are economical, and sometimes showing the operative that some job is less than a fair standard for a day's work. These tests, "critical" or empirical, were made where those who were concerned could see them. Such tests often carry more conviction in regard to the practicability of a given arrangement than would any assemblage of figures.

After a job was analysed in this way, the next step was the review by the Waste Elimination Committee. It was established that this was *not* a voting matter. The Technician presented the

figures and each side had an opportunity to criticise the details. Was any factor forgotten? What precautions had been taken against unforeseen delays? Up to what end breakage would the figures be usable? The job of the Committee members in this review was merely to present any objection. But the Technician decided as to the weight of these objections. Responsibility was thus kept single, and one of the main difficulties of the Committee was swept away. Also the onus of any unpopular move could not seriously be charged to any management or Union delegate. If the delegates had presented their views clearly and forcibly, they had done their part. After the job standard had been made and reviewed, the payment, whatever its form, was left to negotiations between the Company and the Union, just as in the years previous to this joint research.

The joint research undertaken by Mr. Goodell in this spirit and with the co-operation of management and workers continued until a new system of standard practice was evolved.

By 1933, however, the joint research programme, which for several years had proved an outstanding success, appeared to have exhausted its usefulness. The reasons for its discontinuance are not less instructive than the movement which led to its inauguration.

The main reasons for the abandonment of the scheme are stated to be the following:

- (1) Joint Research as it functioned at Pequot began to assume managerial and administrative duties by formulating standards of operations which rightly should have been decisions of the operating executives. This began to divorce the Staff from the aspects of pure safeguarding upon which the original set-up was founded.
- (2) As the programme proceeded, the Union was left with the major job of persuading the workers to accept the findings of the Joint Research Committee. This became the responsibility of the Union members of the staff, plus one or two of the executive board who were familiar with the operations in general—a total of not over three or four individuals at the most.
- (3) Contacts between Union officials and workers became stagnant, as questions involving fewer operatives became the usual trend. In such matters, the Union agent assumed

greater responsibility for decisions, without the usual consultation with the executive board, delegates and worker-body.

(4) In May 1933, the worker-body, deciding that they could no longer rely upon their Union officials to protect them against what they thought were unreasonable requirements of the management, called a strike against the orders of their national officers, and formed an independent union of their own. The reasons that led to this act were, in addition to the above, the necessity for further reduction in the cost of manufacturing, causing the management to reduce wages, and to call for revision of some of the existing job-standards, and the decision of the management that workers whose employment would terminate because of such revisions were to be confined to married women who had husbands capable of supporting their families.

This strike was settled two months later largely because of the requirements of the National Industrial Recovery Act, and the signing early in July of the Cotton Textile Code. The latter had provisions regarding further stretch-outs, and other features which gave the workers substantially what they desired with respect to the main issues at stake.

Although these events resulted in the abandonment of the joint research programme, the day-to-day practice of industrial relations continues to operate between the management of the firm on the one hand, and on the other the new independent union and the Loom Fixers' Local which is still affiliated with the United Textile Workers of America.

REGULAR COLLABORATION BETWEEN MANAGEMENT AND WORKERS

In every department there is a delegate of the Union, and if any worker employed in that department has a grievance, he goes in the first place to the Union delegate. If the Union delegate considers that the grievance is a real one, he will consult the overseer on the matter, and in the great majority of cases the question is settled in the department. If, however, it is impossible to arrange matters amicably in the department, the grievance may be brought to the attention of the Agent at the monthly meeting which he has with the representatives of the Union. At this monthly meeting, at which 24 Union representatives are present, the Agent gives an account of the development of general business

conditions in the course of the last month, together with particulars of the influence of these conditions on production and sales at Naumkeag. He also explains the progress made in any particular question of Union-Management co-operation which may be in evidence at the time. Finally, opportunity is given for the chairman of the Union to raise any question relating to industrial relations and to mention any grievance that may have been brought to the attention of the Union representatives, and which they have been unable to settle directly in the various departments.

This monthly meeting, which brings representatives of the workers into direct touch with the managing director, enables them to feel that they are *au courant* with the progress of the firm, and are directly co-operating in that progress. They, on their part, after the meeting, are able to pass on to the Union members the information which they have received directly from the managing director. They are also in a position to give to Union members explanations with regard to particular aspects of Union-Management co-operation. In April 1932 the particular question at issue was the elimination of oil in spinning. In the spinning departments, on the bulletin boards were to be seen recommendations with regard to the elimination of oil, typed on paper with the Union letterhead. In this and other ways, regular collaboration between management and workers takes place and serves to maintain a spirit of good industrial relations.

CONDITIONS OF WORK

Hours of Work

The main features of conditions of work in the undertaking can be very briefly described. Under normal conditions of production a 48-hour week was worked, the daily distribution of hours being 7.15 to 12 and 1 to 5; on Saturdays 7.15 to 11.30. In 1931-1932 short time was worked, thus: from 1 June 1931 to 1 March 1932 a four-day week was worked, namely, 7.15 to 12 and 1 to 5 from Monday to Thursday, giving 35 hours a week. On 1 March 1932, however, owing to increasing demand, a five-day week was put into operation, namely, 7.15 to 12 and 1 to 5 from Monday to Friday inclusive, giving $43\frac{3}{4}$ hours per week, and sometimes, if extra production were required, work would continue on Saturday, making the full 48-hour week. After the establishment of the Cotton Textile Code, hours of Labour were limited to 40 per week.

Rest Pauses

In each department and on each job, periods of actual work are carefully scheduled so as to provide for adequate rest pauses. In the case of spinning, on an average about 25 per cent. of the total active working period is rest, which includes waiting and watching. In weaving, about 33 per cent. of the total active working period is rest, including waiting and watching. The actual amount of rest allowed depends to some extent on the nature of the job. If the operations required by the particular job involve stooping or other awkward postures, then more rest is allowed for. In other jobs, less rest is normally provided for, because rest periods automatically occur during the operation. For example, in the cloth room, two girls sit at a machine examining cloth unrolled from a machine, with a view to detecting and repairing small defects. If one girl stops the machine to mend a defect on her side of the roll, the other girl on the opposite side automatically rests.

In the case of cleaners in the spinning room, the following timetable of rest pauses was applied in 1932: work begins 7.15; rest 9.34 to 10.10; rest 11.45 to 12 (12 to 1, lunch hour); rest 3.07 to 3.30; rest 4.53 to 5. At 5 o'clock work stops. This provides for a total of rest periods during the course of working hours of 81 minutes. In the case of other operations, an actual schedule of rest periods is not laid down and the operative gets his rest as and when he can, reasonable provision being made for this purpose.

In the case of a weaver operating twenty looms on 90-inch Pequot, the following table summarises the average time taken per hour for each of the operations required of him:

Item of operation	Per loom per hour	Minutes per operation	Minutes per hour
Patrolling backs	3 times	0 214	12 83
Patrolling fronts	3 times	0 123	7 83
Piercing up ends	1 05	0 900	18 93
Pickouts	0 0165	8 600	2 85
All else (call fixer, cloth boy, mark out, get pay, smashes, etc.)			3 01
Total: Work			45 00
Watching and waiting			15 00

It will be seen that out of each hour 45 minutes is occupied in actual active work and 15 minutes is left free for watching and waiting, personal and fatigue. It should be noted, however, that watching and waiting time is not necessarily pure rest. A

weaver during watching and waiting time sits down and does not actually perform any operation on any of his looms, but if a loom stops the man must go and attend to it. It will also be noted that, as one of the mysteries in weaving not yet completely solved is the wide fluctuation that may take place from hour to hour in end breakage, the amount of time which the weaver may spend on piecing up ends varies appreciably for short periods. The figures given in the table quoted above are based on careful observation and experience over a long period and under widely different atmospheric conditions.

Wages

The average wage for operatives employed by the undertaking in April 1932, calculated on a 48-hour basis, was \$22.00. Wages of loom fixers were \$34.00, weavers \$33.00, and the minimum wage paid in the establishment was \$14.00.

In consequence of the continued depression in the textile industry, it was necessary to put into effect in 1932 and 1933 two reductions of wages, each of approximately 10 per cent. The result was that in May 1933 the average weekly wage was \$18, wages of loom fixers averaged \$27.50, weavers \$26.75, and the minimum wage paid in the establishment was \$12.00.

After the coming into operation of the Cotton Textile Code, and with the basis of job assignments somewhat changed, the average wage based on a 40-hour week was \$20.50. Loom fixers averaged \$26.60, and weavers \$23.00. The minimum wage in the North was fixed by the Code at \$13.00.

EMPLOYMENT AND TRAINING

Employment

New hands are hired directly by the overseers in charge of the various departments. The overseer is responsible for the quantity and quality of production in his department, and it is considered right, therefore, that he should have the opportunity of choosing his own personnel. In actual practice, if the overseer finds at 7.15 in the morning, when work commences, that any of his staff are not in their place, he goes to the "spare floor" where those in search of employment are waiting. He selects by personal

interview the most suitable person or persons, and they are immediately set to work. The system of "call girls" is not applied at the Naumkeag mills. "Call girls" are girls who are not regularly employed, but remain at home ready to come at a moment's notice to take the place of absentees.

There is no central employment bureau in the Naumkeag mills, and no central employment system. It is not considered that it would be justifiable to set up central machinery for employment, for two or three reasons. In the first place, the rate of labour turnover is extremely low, so that the number of new hands taken on in normal times is very small. Further, employment is greatly sought after in the Naumkeag mills, and the overseers have large numbers of candidates to choose from, many of whom will be relations or friends of trusted employees. As each overseer is responsible for doing his own hiring, so he is also responsible for discharging. As, however, a careful selection is made before hands are taken on, the number of dismissals is in normal times not great. When it is necessary to lay off employees owing to reduced production or as a consequence of rationalisation, one of the main principles applied in selecting employees for dismissal is that of seniority. In every department a list of the operatives employed is posted on a bulletin board in accordance with the date of first engagement. Employees are proud of their seniority rating, and if it becomes essential to reduce staff, the most junior are, other things being equal, those who are obliged to go.

While, however, each overseer is allowed liberty, in accordance with the general principles of employment laid down by the firm, in respect of hiring and firing, he is limited in respect of employment by his quota. Each department is allowed a certain quota of employees which must not be exceeded. The Agent personally supervises the monthly recapitulation of the actual payroll of the department in comparison with the quota allowed for that department. All staff records are kept in the central office, to which each department submits a weekly record of movements in the staff employed in that department, indicating, in the case of separations, the reason for the separation, for example, "retired on pension", "left to marry", and so forth.

Training

Ordinary operatives normally get their training in the department in which they are hired. They are put first of all on unskilled

work, in which they have opportunities of learning more skilled work, and gradually they are promoted. In the weaving department, for instance, a new hand normally begins as a sweeper. As a sweeper she gradually acquires a working knowledge of the next higher job, namely, that of the cleaner. The cleaner gradually learns the work of the battery hand, and the battery hand in turn that of the weaver. Whether promotion is slow or rapid from one job to another naturally depends on a variety of circumstances, the occurrence of vacancies, and the intelligence, adaptability and skill of the employee. In the case of technicians, provision is made by the mill for its technicians to take courses in Textile Technology from time to time at the Massachusetts Institute of Technology, Boston, the undertaking paying their salaries and expenses throughout the course. Permission is also freely granted to technicians to attend meetings of technical bodies, in some cases leave with pay and travelling expenses being accorded.

SAFETY, HEALTH AND WELFARE

Accident Prevention

Much attention is paid to the prevention of accidents. In addition to the measures for industrial safety required by legislation, every endeavour is made to provide additional mechanical safeguards, and to educate the employees, with the co-operation of the Union, in the prevention of accidents. In each department there is a special bulletin board on which records are prominently displayed of the accidents occurring in that department, together with the accidents taking place in the whole mill. The causes of the accidents in each department are given on a typewritten sheet affixed to the board. Posters containing publicity and educational matter relating to accident prevention are also displayed. A representative of the insurance company visits the mill once a week and meets the members of the workers' accident committee, which consists of one worker from each department. He discusses with them any additional measures, either of a material or psychological order, that could be taken with a view to accident prevention. The representative of the insurance company also meets the foremen, and has access to the superintendents and to the Agent.

Health Provisions

Industrial nurses are employed who attend immediately to all accidents. It is impressed upon employees that even the slightest accident should be reported, and attended to without delay. The nurses also give attention in cases of sudden sickness or malaise on the part of workers, and give them advice on general matters of health. Serious accidents are immediately reported to the works doctor and are treated by him. The works doctor and the industrial nurses are also responsible for the general hygienic provisions of the mill, which are maintained in a high state of efficiency.

In the case of employees in the bleachery, where good eyesight is indispensable, the eyes of every employee are periodically examined at the expense of the undertaking by an oculist, and glasses are supplied to them free in accordance with the oculist's prescription.

Workmen's Compensation and Pensions

Workmen's compensation is provided for in the mills in accordance with the Workmen's Compensation Law of the State of Massachusetts.

Although there is no regular pensions scheme in operation, the Agent has discretionary power to provide pensions for operatives of advanced years with long service in the firm who become incapable of work. Operatives have no right to a pension, but in cases of long service the Agent, in his discretion, grants retiring allowances. The pension given depends on a variety of conditions, such as age, wage, long service and personal circumstances. In the month preceding the writer's visit to the mill, three operatives were placed on pension, on allowances varying from \$5.00 to \$15.00 per week.

Welfare

With regard to welfare, the general policy of the undertaking is to pay its employees the highest wage possible, and not to spend money on accessory and marginal welfare institutions ("the welfare of the workers is placed in their pay envelopes"). It is not considered necessary by the undertaking to make special provision for the employees after their hours of work in the mill. Salem is not a large town, its population numbering less than

50,000, and it abounds with religious and charitable associations making provision for recreation and for the health of its inhabitants. The Young Men's and Young Women's Christian Associations and the corresponding Catholic and Hebrew associations provide educational and recreational facilities. Playing fields are within easy reach, and in the summer the sea branches afford opportunities for healthful and invigorating recreation.

From the point of view of health, there are excellent hospitals in the town, and various national and religious organisations maintain orders, fraternities and sororities which take care of the sick.

As a large proportion of the workers return to their homes for the midday meal, no need has arisen for the provision of a cafeteria or restaurant. For the convenience of those who remain in the mill at the lunch hour, however, a lunch room is provided, with an attendant who will heat food which the employees bring with them from their homes. Employees may eat their lunch in the lunch room, in their departments, or in the open air. After having eaten their midday meal, employees often join in ball games in the grounds of the mill.

No general stock ownership scheme is in operation in the mill, but all employees—executives, overseers, office employees and operatives—are permitted to purchase shares in the company by a system of deferred payment. It is considered, however, that owing to the wide market fluctuations in the price of general textile securities, they are not suitable investments for the general body of employees to acquire in this manner.

Finally, reference may be made to the Americanisation School conducted in the factory in the winter months. The factory supplies the room for the School, and the State furnishes the teachers. The School meets two hours per week and its main aim is the teaching of English to employees whose knowledge of this language is rudimentary. In March a little graduation ceremony takes place, with an entertainment provided by the Company. A knowledge of English is useful both to the employees and to the Company: to the Company because it prevents misunderstanding of orders given by the overseer, and to the employees because it supplies them with one of the conditions necessary for naturalisation. As a matter of fact, in the case of new employees, only those who understand English are now engaged.

INFLUENCE OF LABOUR LEGISLATION

Little reference has so far been made to the effect of labour legislation on industrial relations within the mill. That effect is, however, far-reaching, for basic conditions are largely determined by the system of labour legislation of the State of Massachusetts. It is necessary here only to mention the more important provisions of the various laws.

Work is prohibited on legal holidays, except such work as is absolutely necessary, and it is also prohibited to make up time lost by reason of a legal holiday by working more hours on any one day than the law permits. Work on Sunday is prohibited unless the worker is allowed during the six days next ensuing twenty-four consecutive hours without labour. Before operating on Sunday, every employer, with certain specified exceptions, must post in a conspicuous place on the premises a schedule containing a list of his employees who are required or allowed to work on Sundays, and designating the day of rest for each.

Conditions of work of women and children are particularly carefully regulated. Their hours of work are normally limited to 8 in the day and 48 in the week, with provision for additional hours on the first five days of the week in order to provide for the Saturday half-holiday. No woman over twenty-one may be employed in any capacity before 6 a.m. or after 10 p.m., or in the manufacture of textile goods after 6 p.m. This provision, it will be noted, prevents the application of a two-shift system in the textile industry in Massachusetts. Similar provisions, varying according to age, apply to boys under eighteen and girls under twenty-one. No child under fourteen is allowed to be employed in any industrial occupation. Employment of minors under sixteen is prohibited in the case of certain specified occupations and employment of minors under eighteen is prohibited in a further series of dangerous or heavy occupations. Women may not be employed in industrial undertakings within two weeks before or four weeks after childbirth. Women and children, subject to certain specified exceptions, must be allowed their meal times at the same hour. No woman or child may be employed for more than six hours at a time in a factory or workshop without an interval of at least forty-five minutes for a meal. Provisions are also contained in the law with regard to the employment of children in street trading and other similar occupations, the lifting and moving of weights, and so forth.

Further, laws provide for the establishment of minimum wages for women and minors and the establishment of the necessary wage boards.

The laws further contain detailed provisions as to health and safety in factories and mills. These are particularly comprehensive in the case of textile factories, where detailed regulations are made with regard to the use of standardised wet and dry bulb thermometers for the purpose of recording and regulating the humidity of the atmosphere and the temperature. Detailed regulations are also made with regard to the installation of safety devices for machinery and for the lighting, ventilation and cleanliness of the premises. Further, sections of the general laws contain regulations with regard to the weekly payment of wages and precise specifications concerning the payment of wages in cotton textile factories. It is provided, for example, that no employer shall impose a fine on any employee engaged in weaving for imperfections arising during the process of weaving. In every textile factory, in every room where any employees work by the job, specifications are to be posted of the character of each work to be done by the employees and the rate of payment.

Workmen's compensation, as already indicated, is also provided for by law.

The law provides for action to be taken by the board of conciliation and arbitration in the case of industrial disputes.

This very brief enumeration of some of the provisions of the system of labour legislation of the State of Massachusetts will give some indication of the extent of the control exercised by the law over conditions of employment.

In certain respects these legislative measures have been superseded by the provisions of the Cotton Textile Code, which lays down, *inter alia*, that hours of work may not exceed 40 per week, and that no minor under sixteen may be employed.

CONCLUSION

The working of industrial relations in the Naumkeag mills combines, it will be seen, several features of interest. A thorough-going system of Union-Management co-operation was developed in an undertaking with a long tradition of labour management on autocratic and even paternalistic lines. All that is good in that tradition was transmuted into the maintenance of cordial personal

relations between management and workers within the framework of collective agreements and labour legislation. While some features of the system proved unequal to the strain of an exceptionally difficult period, the value of the results achieved remains very great.

The unions co-operate with the management not only in the regulation of labour conditions, but also in the development among workers of diverse national origins of a spirit of *esprit de corps* and loyalty both to the Unions and to the mills.

The management, on its part, takes the workers into its confidence, realising that better work will be done if causes of suspicion and ill-will are removed before they have time to breed trouble. By associating the workers in technical research, the management was able to apply the principles of scientific method throughout the whole plant, and thus assure the continued operation of the mills in the face of intense competition and throughout a period of profound economic depression.

A Paris Department Store (La Samaritaine)

In order to emphasise that these studies of industrial relations are intended to cover the relations between employer and workers not only in industry but in commercial establishments as well, it has been decided to devote one of the present series to a big department store. The undertaking chosen is the "Samaritaine Stores" (*Grands Magasins de la Samaritaine*) in Paris, which, besides being one of the largest enterprises of its kind in the world, also has certain features of special interest in the form of profit-sharing and labour co-partnership schemes.

Like all department stores, the establishment under consideration here is essentially a distributive organisation. Vertical concentration is not popular in this type of undertaking; although superficially logical, it would be unsatisfactory if applied on a general scale. In the Samaritaine Stores it is found only in the men's ready-made clothing department, in which connection it will be examined in due course. The present study is confined to the Paris area, the undertaking having no other branches either in the provinces, in the French colonies or abroad.

The Stores are situated in the centre of Paris near the river Seine on the right bank, with an annex on the *grands boulevards* between the Opéra and the Place de la Madeleine. The men's ready-made clothing workrooms and their warehouses are higher up the river. The general warehouses and delivery and despatch services for goods ordered to be sent by personal shoppers or ordered out of the catalogues are housed in a large building on the outer boulevards to the south-east of Paris. This threefold division of the various services was necessitated by the impossibility of finding suitable premises near the Store itself. Its inconveniences have been mitigated by a direct and regular system of communications and by making the several sections of the undertaking more or less autonomous.

Including the Store itself, the packing and forwarding services, the workrooms and the warehouses, the Samaritaine covers a

total ground area of 48,000 square metres and a total working area of 270,000 square metres. It employs a staff of between 8,000 and 9,000 according to the season and has an annual turnover of 1,500,000,000 francs involving cash transactions amounting to over 5,000,000,000 francs.

It is unnecessary to give a detailed description of the sales departments of the store, since the assortment of goods displayed is more or less the same in all establishments of this kind. Like most other similar undertakings, the firm takes all possible precautions against fire, having a special staff of firemen and special equipment including a system of fire alarms and automatic extinguishers. Provision is also made for emergency lighting, in the event of the municipal power supplies being interrupted, by power engines in the basement of the main building, which also supply the power for the lifts and moving staircases.

The workrooms in which men's clothing is made are in a separate building and employ 500 persons, mostly women. They turn out only a quarter of all the garments sold by the store, the rest being obtained from manufacturers¹. Near by there is a warehouse for storing the manufactured stocks of clothes, which also serves to house the reserve stocks of women's underlinen and shoes.

The despatch, delivery and general reserves services employ between 2,500 and 3,000 permanent employees and a number of temporary helpers varying with the season. The general reserves are a replica of the Store itself; they contain stocks of all the goods advertised in the firm's catalogues with a view to preventing the overcrowding of the actual sales departments and enabling mail orders to be dealt with as quickly as possible². These services also receive and distribute incoming correspondence, again with a view to speeding up operations.

To complete this general description of the undertaking about to be examined some account must be given of its credit sales branch, *La Semeuse de Paris*. This company, which is under the direct supervision of the under-manager of the parent firm, is intended to facilitate the purchasing of goods by allowing payment by gradual instalments. The scope of its operations has been

¹ In the main store building itself there are also women's ready-made clothing workrooms, and fur-working, cabinet-making, upholstery and bedding workrooms. These employ a comparatively small number of workers for purposes of alterations and special orders.

² Except in the case of the ready-made clothing departments, which as already stated have their own warehouse.

wide from the beginning, and its activities extend to all wholesale and retail firms, which may open a current account with it upon application and after due enquiry. Its chief customer is nevertheless the Samaritaine Stores. Precautions are taken against dishonest or reckless borrowers; a thorough enquiry is made into the circumstances of every customer before he is allowed to open an account, and strict conditions are laid down for every loan. These include cash down for one-third of the amount, a maximum period of six to twelve months for repayment, and the obligation to settle the previous account before opening a new one. Lastly, the range of goods which may be acquired by credit vouchers is strictly limited, luxury articles and goods for immediate consumption being excluded.

HOW A DEPARTMENT STORE WORKS

No big department store could carry on its business successfully if it were organised on centralised lines: the concentration in the same hands of such varied activities, dealing with such a number of different goods, would inevitably paralyse all initiative and lead to the ruin of the undertaking. Hence every big store as it has developed has been obliged to allow a large measure of freedom to its principal services, especially those responsible for sales, i.e. the departments. At the same time this freedom does not imply an absence of supervision. In the Store which is under consideration here, there are twenty-eight administrators, each in charge of several departments or central services. They in turn are responsible to the two managers of the limited partnership company of the *Grands Magasins de la Samaritaine*. Managers and administrators have frequent contact with each other; they meet in conference once a week and some of the administrators also make daily reports to the head manager, who is responsible for the general conduct of the establishment.

Side by side with this organisation, there are the shopwalkers, who have their own grading and are responsible solely to the general management.

The Departments

The Samaritaine Stores has ninety departments, each of which is in charge of a head and one or several assistant heads (300 in all). Each of these departments is organised like a separate shop. The work of the heads of departments has been described by Mr. Gabriel

Cognacq, in an account which gives some idea of how all similar establishments operate¹:

" Each department is in itself a large commercial establishment, since its turnover always reaches a very respectable number of millions of francs, fluctuating between 20 and 30 millions in certain departments. The head of the department and the administrator who supervises several department are really shopkeepers with full freedom of action within their appointed field; they buy what they wish and where they wish within the limits of the credits allotted them by the management, which in return for the partnership to which it admits them requires only that they shall produce a turnover and a profit fixed at each yearly stocktaking. They may obtain larger credits during the course of the year on showing that their turnover to date has exceeded the management's estimates.²

" But whereas the ordinary retailer is obliged to deal with a thousand details of his business, which cost him a great deal of time and worry, the heads of departments and administrators are absolved from the trouble of all the contingent operations of buying and selling, which are done for them by the general services of the store. The central accounts department settles their bills, the advertising service inserts the notices they transmit to it in newspapers and catalogues; the local delivery service and the provincial despatch service (which also forwards to the colonies and abroad) are responsible for delivering to their destination the goods they have sold, and the information service informs them at any time of the quality and price of similar lines of goods sold by their competitors. They are thus free to devote all their attention and all their activity to the work of buying and selling, and they are in constant contact with the customers whose whims and requirements they can test at any time.

" The goods in stock must be sold very quickly and therefore at a very small profit. If they are selling badly, they must be cleared at once at reduced prices, at any sacrifice, since the essence of the trade is to renew the stock as many times a year as possible with the same amount of capital, so that this capital may be continually working and producing. It is better to incur a 20 per cent. loss at once on an unpopular line of goods than to let them lie on the shelves where they lose their freshness and more and more of their selling value, a principle which accounts for the frequent clearance sales held by big stores. The head of the department will try to balance the loss by making a larger profit on a more popular line. This, however, is not always easy because of the keen competition of other stores, and if he makes too many mistakes in the same year either his turnover or his profits will fall, and he will have to make room for a colleague who may be more skilful. For him this is the equivalent of bankruptcy in the case of a small retailer.

" The typical features of the selling policy of big stores are, as you know, free admittance, freedom to circulate within the store, prices marked in plain figures, and the possibility of exchanging or returning purchases. The customer, who may be either timid or undecided,

¹ A talk on department stores published in *L'Echo des Roches* in 1933 by Mr Gabriel Cognacq, head manager of the Samaritaine Stores.

² The practice of entrusting all buying and selling operations to the heads of departments is not general; in some department stores the buying is done by a central body.

wants to see what there is without being pestered to buy; to make up his mind or to obtain information without feeling obliged to buy anything at all, and to yield to temptation without any anxiety, knowing that he need not keep the object he has bought if he changes his mind on reaching home. The big stores display their goods in such carefully arranged order, in spite of their apparent lack of method, that the desire to buy is born of itself and the purchase is made almost automatically. All the shop assistant has to do is often merely to make out the bill. Thus sales are effected very quickly; the assistant earns a good living and the store is able to apply its selling policy more and more easily, i.e. to sell the article as nearly as possible at the price charged by the factory with the smallest possible addition for overhead expenses, and making a very small profit or even none at all if it should seem advisable for purposes of advertisement. This practice has given rise to the classic joke that the big stores lose on each separate article they sell but make it up on the lot.

"As a matter of fact, this paradox could actually be made to come true, and I will tell you how. The secret is that the store has actually already made a profit on the article before it is displayed for sale at all—it has made a profit on its cash reserves. What exactly is this profit? It is nothing but the rent on the money advanced to the department for the purchase of its stock, the equivalent of the interest charged by banks on the credit they allow to retailers; but in the department stores it is the managers who act as bankers to the shops represented by their departments. You will see now why the first profits of the department store are made not on sales themselves but on the turnover of capital. The quicker the goods can be sold, the quicker is this turnover and therefore the larger the profits of the store. This explains the fact that a department store can often sell at a loss; it wins on all hands since if it takes a commission of 3 or 4 per cent every time it advances the money to stock a department and if it lends the same capital to this department several times a year, this capital in itself will have earned a very considerable income by the end of the year.

"This profit on cash reserves also serves another purpose: it forces the buyers to buy carefully, since they know that they must show the management a gross profit fixed in advance, and that the management bases this profit on the purchase price plus the interest on its capital.

"It must also be remembered that the store will often have made its profit on cash reserves and its profit on sales even before it has paid the manufacturer for the goods concerned, since much of its stock is sold almost before it has reached the counter, whereas it need not be paid for until a month or ninety days after delivery. Hence it sometimes makes yet a third profit in the form of discount for early payment; for whatever the terms of payment agreed upon between the buyer and the manufacturer, the store is always in a position to pay as soon as it takes delivery of the goods, provided that it keeps plenty of cash in hand. It may even, although this is less frequent, pay advances on account of goods in course of manufacture. All these bills are, of course, discounted at a rate proportionate to the period which still has to run before the normal date of payment."

The Central Services

It would be unnecessary to give a detailed account of all the central services in a big department store, but there are some

which are of particular interest for the purposes of this study and may therefore be described in somewhat greater detail. These are the delivery and despatch services, backed by the general reserves and housed, in the case of the Samaritaine Stores, in a large building some distance from the shop itself.

The process of despatching orders differs according as to whether the goods are selected personally at the store by the customer or ordered by post. Goods bought in the store, if not taken away by the customer, are sent to the delivery and despatch services¹. If the goods are to be paid for on delivery a bill is attached, and payment must be secured by the delivery man before leaving the parcels. The articles may, however, be returned or exchanged by the purchaser subject to certain conditions which are the same in all the big stores.

The system is slightly complicated when the customer is given a collective bill enabling him to make purchases in different departments without having to pay at each cash desk. All the articles with the same account number are sent down shoots to the basement of the main building, where they land on a revolving tray and are removed as they go past by the employee in charge of the series to which the number belongs, and placed on a rack. When the customer has completed his purchases he has to hand in the collective bill to a central cash desk, and this is also sent to the basement. As all the purchases are entered on the bill it is an easy matter to collect and check them, and all that then remains to be done is to add the invoice if payment has not already been made at the central cash desk.

In the Samaritaine Stores however, the majority of purchases are selected from the catalogues, some of the orders coming from the other side of the world. Most of the mail comes in at about 8 a.m.; the personal letters are first sorted and put aside, and the rest are then opened by machine. A second sorting then takes place by sections, that is, by groups of departments served by the same railway system, by colonies or by foreign countries, according to the postmark. Envelopes which are stamped illegibly or by a travelling post office are placed on one side, opened last and classified in the appropriate section according to the address inside the letter.

¹ In the case of heavy goods the articles selected are taken directly from the central reserves to save transport expenses, those displayed in the shop serving merely as samples

A clerk for each section collects the letters within his area, stamps them with a reference number and makes them up into packets of twenty. These are then handed over to the readers, who have to decide and note the category in which each is to be filed, i.e. order with remittance, firm order, return of goods, complaint, etc. When this has been done the letters are collected again, sorted into categories and filed. The orders with remittances are sent to the accounts department with the forms for payment enclosed, and the sum with which the purchaser is credited is entered on the file. These letters are then treated in the same way as firm orders except that they are given priority.

All the mail orders are copied on slips corresponding to the departments concerned, each section having a different-coloured slip to facilitate the classification of the articles when supplied. This is done by home workers. The letters are distributed on the day of their arrival and must be returned in the course of the following day with the corresponding slips. In connection with this process of classifying the separate orders on slips, the address lists for advertising purposes are also brought up to date.

These slips are then classified by departments and transmitted to the appropriate department for the articles ordered to be supplied¹. When the order specified on the slip has been supplied and checked, the article is placed on a conveyer passing through all the departments and carried on to a revolving tray. Round this tray a number of assistants sort the goods into sections by the colour of the slip and send them down shoots to the sections in the lower storeys. There they are sent to the sorting department, where, by means of a subsidiary system of numbering, the articles sent from the various departments to make up the order are quickly assembled. The articles are then put with the file containing the original letter, but are not taken out until the order has been completed or completed except for given articles which the file states cannot be supplied immediately. Next to the sorting department is the department which has to see that the goods sent by the various departments correspond to those ordered. At this stage the goods are roughly parcelled up and sent on by conveyer to the "receivers". The latter are responsible for seeing that the numbers on the slips tally exactly with those on the files and that the replies of the departments concerning the articles

¹ Actually they are handed to the reserves department corresponding to the appropriate department in the Stores themselves.

they cannot supply or cannot supply exactly as ordered are clearly noted outside the files, so that they cannot be missed by the employee responsible for sorting the files after the order has been despatched and informing the purchaser accordingly. The parcel is then sent to the "debiting department" where a clerk types out the invoice, taking account of any payments made in advance, the label, and, if necessary, the form for reimbursement. These documents are placed in the file¹, which is then attached to the parcel and sent with it to the checking service, which verifies the address and debiting and reimbursement operations. The package is then sent to the packing department. The final stage in its long journey is through the parcels post service, which fills in the post office or railway forms and conveys the parcels to the post office or to the appropriate railway station. The files containing the orders which have been supplied in full are then destroyed, only the copies of the documents for the accounts department and the receipts for the parcels despatched being kept, and providing a record of the order and its execution.

As regards goods delivered directly to the customer's house, no distinction is made between orders sent by post and those given by personal shoppers. They are classified by delivery districts, some of which are a considerable distance from Paris. The delivery by post or rail of goods bought at the Stores by the customer does not call for any special comment.

Superintendence

Superintendence is an important factor in the conduct of a department store. It is exercised on behalf of the management by shopwalkers who ensure constant supervision of the departments and services, their duties extending as far as the temporary redistribution of staff among the different departments should one of those under their supervision be overstaffed².

The duties of the shopwalkers are laid down by the rules of the establishment. They have to make a daily written report to the General Superintendent, describing the events of the day and adding their personal comments. They are responsible for setting an example of correct behaviour and speech, maintaining discipline

¹ As regards "heavy" packages a distinction has again to be made; as each article is despatched separately, they are dealt with by means of a set of slips which do not pass through the whole series of operations just described.

² There are 180 shopwalkers in the Samaritaine Stores under the control of four divisional superintendents and one General Superintendent.

among the staff and intervening if they hear noisy or heated discussion. They have to report to the management any complaints from customers and any shortcomings on the part of the staff, even down to listlessness and slowness in carrying out their duties.

The discipline in all department stores is strict. No talking is allowed between men and women employees except on matters connected with their work, a rule which is common to all undertakings employing a large staff and which the shopwalkers are required to enforce with particular strictness. It is also the duty of the shopwalkers to keep a close watch over the customers themselves. In this they are assisted by women superintendents who mingle with the saleswomen and are less conspicuous than the shopwalkers in their frock coats and white ties.

A few words must also be said on one or two other points to complete this explanation of how a big department store works. On grounds of expediency it has been found necessary in certain cases to limit the autonomy of the departments and services. In the case of the men's ready-made clothing department, for instance —the only example of vertical concentration from production to distribution in this firm—the workrooms and sales departments are controlled by one and the same management. The reserves of these departments in their special warehouse are grouped by storeys or sections of storeys corresponding to each department. The heads and assistant heads of departments (the latter being known as "seconds") withdraw their stock from the reserves, giving a receipt for it to the storekeeper.

A similar measure of rationalisation is applied in respect of the general reserves. These are important enough to warrant the permanent detachment of an assistant from the department to take charge of its reserves, responsible for supplying articles ordered out of the catalogue and reporting to his chief at the end of the day. The administrator in charge of the delivery and despatch services does not intervene unless cases of delay or neglect are brought to his notice, when he forwards his remarks to the administrator responsible for the department concerned. This system enables orders to be supplied with the maximum of speed and accuracy.

THE STAFF

Under this head consideration will be given successively to the engagement of workers, working conditions and pay, and dismissals, laying stress only on those features peculiar to department stores in the Paris area and to the Samaritaine Stores in particular.

Engagement of Workers

With a staff varying according to the seasons between 3,000 and 5,000 permanent and temporary employees for the sales departments alone, 800 odd men¹, nearly 400 cashiers (men and women), 200 book-keepers and as many typists, and between 800 and 1,500 employees in the delivery and despatch services, it is obvious that recruiting methods must be strictly defined. This is all the more necessary in that the superior posts, up to the very highest grades, are habitually filled by promotion from within.

The general rule adopted by the big department stores in the Paris area is to admit to their staff as salesmen and saleswomen (by far the largest section of the staff) only persons with good references who have had at least a year's experience in a similar but smaller undertaking. As an exception, and strictly within the limits of the posts available, apprentices between sixteen and twenty years of age are also accepted, the girls as junior shop assistants and the men in the despatch department. In these subordinate posts they learn the ways of the house, and if found suitable are promoted to salesmen and saleswomen as soon as a vacancy occurs.

Candidates for posts are required to apply personally at a specified time. They must first fill in a form stating their full name, age, birthplace, nationality, religion, education, present address, family situation, previous employment, apprenticeship served, reasons for giving up previous jobs, knowledge of languages, diplomas or certificates gained, and lastly, stating whether they are prepared on entering the firm's employment to furnish an extract from their police record. The candidate is then interviewed by the head of the staff branch, all further questions asked and information given being recorded together with the personal impressions of the person conducting the interview. After this, unsuitable candidates are weeded out and a strict investigation is

¹ See p. 80 for composition of this category.

made on the basis of the particulars supplied by those whose names have been retained. As regards applicants who began their career in the provinces, the management communicates by correspondence with their former employers, and the mayors and police authorities of their place of residence. In this way personal files containing the fullest possible details are constituted and a second selection is made. The applicants ultimately chosen are summoned whenever a vacancy suitable to their age and qualifications becomes available¹.

Working Conditions

The working day of the staff of the Samaritaine Stores begins at 8.45 a.m. and the employees leave the building at 6.45 p.m., the heads of departments and their assistants leaving last, after seeing that all their subordinates have gone. A break of sixty-five minutes is allowed in the middle of the day, when the firm provides a free meal, compulsory for most of the staff, in its restaurants, one of which is in the main building and the other in the general warehouse. The meal is served in three shifts from 10.30 a.m. to 1.30 p.m. All department stores in the Paris area are closed on Monday morning.

The rules governing annual holidays are as follows: both salaried and wage-earning employees may if they so desire take fifteen days' leave during the holiday period, which normally extends from 1 May to 31 August of each year. They receive no pay during their leave, but holiday allowances are paid with the salary or wages for the month or last week of August to all members of the staff entitled to them, that is, to all permanent employees or workers with a full year's service (from 1 August to 31 July of the following year) during which they have not been absent without permission for more than thirty-one days (the two months' leave granted to women in case of childbirth being considered as authorised leave).

The heads of departments and services and their assistants receive the interest due to them on turnover during their fifteen days' leave, but their fixed remuneration is suspended. Workers of both sexes in the workrooms for men's and women's clothing, furriers, cabinet makers, furniture makers, upholsterers, bedding and mattress makers, firemen, packers and lingerie makers paid

¹ Francis AMBRIÈRE: *La Vie secrète des grands magasins*.

by the week receive a holiday allowance equal to one week's earnings.

Employees or manual workers paid by the month receive a lump sum varying with their job, sex and age according to the following scale. The first category comprises odd men (inside men, delivery men, workers in the supplies service and electricians, night watchmen, cooks and waiters in the staff restaurants, women in the sanitary and cleaning services, and those responsible for collecting waste paper). All the rest of the staff belongs to the second category.

SCALE OF HOLIDAY ALLOWANCES FOR WORKERS AND EMPLOYEES
PAID BY THE MONTH

Age at end of year (31 July)	First category		Second category	
	Men	Women	Men	Women
Years	Fr.	Fr.	Fr.	Fr.
Under 17	120	120	120	120
17 to 21	150	140	150	150
21 to 23	200	160	200	175
23 to 30	220	180	240	200
Over 30	280	220	300	250

Wages and Salaries

It is a matter of fairly common knowledge that the salesmen and saleswomen in big department stores are paid on the basis of a commission on their sales after deducting those cancelled or not confirmed because the goods in question were returned or the order cancelled before delivery. The old fixed rates of remuneration established for the occupation before the devaluation of the currency have been maintained ever since; they vary between 25 and 100 francs a month in the Samaritaine Stores. This shows that the practice of paying remuneration as a commission on sales, which is known as *guelte*, is so widely accepted that the payment of a fixed monthly sum no longer has anything but a nominal value as a survival from the past.

Average figures for the earnings of the staff of the Samaritaine Stores according to age and occupation are given in the table on pages 82 and 83. It may be noted that as regards sales the turnover

varies very considerably from one department to another. A few years ago salesmen and saleswomen earned an annual income of between 12,000 and 20,000 francs according to the department and to their individual efficiency. The average has fallen slightly since the onset of the depression.

Wherever possible payment is at piece rates rather than at time rates, not only in the case of workers in the clothing workrooms but for the staff of the delivery and despatch services, the typists and the clerks responsible for checking the manifold book-keeping operations.

The higher-grade staff—heads and assistant heads of departments and administrators—also receive a fixed salary and a percentage on turnover, the latter forming by far the larger part of their remuneration. In the case of administrators, this percentage is calculated on the turnover of the whole firm and not on that of the departments actually under their charge, this arrangement being intended to strengthen the community of interests between the members of the higher-grade staff. In accordance with the principle of the autonomy of the individual departments, however, the heads and assistant heads are paid on the basis of the net sales of their respective departments.

The free midday meal provided by the firm costs it an average of 1,800 to 2,000 francs per year for every employee. This meal is compulsory, and the management considers that the money is well spent, the outlay being balanced by a better output on the part of the staff. Members of the staff are also allowed a discount of 15 per cent. on all their purchases at the stores, but they may only do their shopping between 8.45 and 9.30 a.m. in order not to interfere with the ordinary customers.

The profit-sharing scheme established under the company's articles is dealt with in a separate section, but it may be noted here that with very few exceptions these arrangements increase the earnings of practically all members of the staff¹. The family allowances which also go to increase the income of heads of families are discussed at length in the section devoted to welfare schemes.

¹ The annual wages bill for 1933 was 150 million francs and the amount of profits distributed about 27 million francs.

AVERAGE EARNINGS OF STAFF OF THE SAMARITAINE STORES BY OCCUPATION FOR 1933
(EXCLUDING PROFIT-SHARING BONUSES AND FAMILY ALLOWANCES)

Occupational category	Method of payment	Men				Women				Variation in wages	
		Under 21 years		Over 21 years		Under 21 years		Over 21 years			
		Number employed	Average annual wage								
Salesmen, saleswomen	Commission	75	9,500	1,995	12,600	91	9,500	1,304	12,600	Lunch	
Sales, Provinces	Task	19	7,360	293	15,010	2	8,500	2,13	12,100	"	
" Paris suburbs	Time	—	—	29	19,900	4	8,500	41	11,800	"	
Junior shop assistants	Time	—	—	—	—	—	—	26	8,299	"	
Ticketeters (women)	"	—	—	—	—	—	—	36	8,500	"	
Lingerie makers	"	—	—	—	—	—	—	20	7,800	"	
Shopwalkers	"	—	—	135	15,600	—	—	—	—	Lunch	
Superintendents	"	—	—	—	—	—	—	—	—	"	
Checking, Paris sales	Task	14	6,600	12	11,000	15	7,000	28	9,000	"	
" Provincial sales	Task	3	8,000	15	11,100	38	8,200	32	10,500	"	
Complaints, Paris customers	Time	—	—	13	15,000	1	12,200	21	12,600	"	
Book-keepers	Task	6	7,100	18	12,700	7	7,500	14	10,200	"	
Cash desk clerks	Task	—	—	29	11,300	—	—	33	11,200	"	
Book-keepers, Paris deliveries	Time	—	—	12	18,400	3	8,900	23	12,500	"	
Supervising cashiers	Time	—	—	155	13,500	—	—	188	10,400	"	
Telephonists	Time	—	—	77	14,800	3	8,400	8	11,100	"	
Receipt of goods	Time	—	—	—	—	—	—	28	9,300	"	
Odd men (inside)	Time	—	—	—	—	—	—	5	7,900	"	
Delivery men (inside)	Task	—	—	—	—	—	—	5	11,100	Lunch and uniform	
" (outside)	Time	—	—	—	—	—	—	—	—	"	
" (outside)	Task	—	—	—	—	—	—	—	—	"	
Supplies men	Time	1	8,200	64	9,900	—	—	—	—	"	

Dismissals

Any employee who has a complaint to make about his superiors—heads of departments or services and their assistants—may at any time claim a hearing from the responsible administrator. Usually a transfer to another department or service is applied for. In the rare cases where the administrator cannot settle the incident the matter is referred to the management. This is the system in force in the Samaritaine Stores, and is customary throughout the trade.

In the event of dismissal the administrator's intervention is compulsory. When a complaint about an employee is lodged by the head of a department or service, the offender is sent for by the administrator, questioned and usually warned that he will be dismissed in the event of any further complaints. In some cases the administrator does not dismiss the employee concerned until a third complaint is received from his responsible chief.

CO-PARTNERSHIP AND PROFIT-SHARING

By deed of 16 July 1914, Mr. Ernest Cognacq and his wife, Mrs. Marie Louise Cognacq-Jay, transformed the various undertakings in their ownership into a limited partnership share company. The articles of association of this company, which are summarised below, defined its object as that of ensuring that "the staff, which contributes now or in future to the prosperity of the Samaritaine Stores shall henceforth receive, after serving for a specified length of time in the undertaking, an important share in the company's profits". This share in profits was intended by the founders of the company to improve the position of the staff, and was in no way to affect the conditions of remuneration in force at the time or in the future; and, lastly, the articles were stated to be drafted with a view to enabling the staff to acquire a large part of the firm's share capital.

The life of the company was fixed at ninety-nine years from the date of its actual constitution (1 August 1914), subject to dissolution or prolongation under specified conditions. Its registered capital amounted to 36 million¹ francs divided into 1,000-franc

¹ In view of the devaluation of the French currency, the firm would have been justified in increasing its capital to five times this amount. So far, however, this step has not proved necessary, nor is it contemplated for the future.

shares. Of this amount 34,500 shares were assigned to Mr. and Mrs. Cognacq on account of the capital contributed by them, so that only 1,500 shares remained to be taken up by the staff or by persons unconnected with the firm. Each of these shares carried with it the right to an equal share in profits and in the firm's registered assets.

Acquisition of Shares

Since 1916, when the Cognacq-Jay Foundation was formed¹, the position has been that the Foundation holds half the company's shares, while the other half is available for the staff, with the exception of a certain number, fixed by the articles at 200 each, which must be held by the managers and deposited as a guarantee in the firm's treasury and are non-transferable so long as they continue to occupy their posts. Thus, even in the very doubtful contingency of the staff of all grades combining together and having acquired all the shares to which they are theoretically entitled, the majority would still be in the hands of the managers and, in fact, of the head manager alone, since he represents the capital held by the Foundation at the company's general meeting.

The founders of the company also guarded against the possibility of the formation within the staff of a caste of shareholders with hereditary rights. Failing such precautions the number of shares available for new members of the staff might soon have been reduced to negligible proportions, while the shares reserved for the staff would have passed within a comparatively short space of time into the hands of persons otherwise unconnected with the undertaking. Hence a number of safeguards were provided, some in the articles of association themselves and some in special company's rules.

Articles 10 to 14 of the articles of association² define the nature of the shares and the conditions for their acquisition or transfer as follows:

Article 10

The shares must be registered in the holder's name. They may not on any account be converted into bearer bonds. They are represented by share certificates detached from a counterfoil register and bearing

¹ Since the death of Mr. Ernest Cognacq in 1928—his wife having died in 1925—the two managers of the company are Mr. Gabriel Cognacq, nephew of the founders and head manager, and Mr. Georges Renand, under-manager.

² These articles were amended on several occasions, in particular on 10 November 1919 and 15 November 1923. Only the provisions at present in force are considered here.

the manager's signature. These certificates are stamped with the firm's impress, bear a serial number and have stated upon them the quantity and numbers of the shares they represent. Interest and dividends are legally payable to the bearer of the share certificate. A shareholder who loses his certificate may be issued with a duplicate by the company, but not until six months have elapsed since the loss was notified to the management. Pending the issue of the new certificate, payment of interest and dividends is suspended.

The right to unclaimed interest or dividends lapses five years from the date on which they fell due.

Article 11

The rights and liabilities attached to a share are transferred with it to the new owner.

Ownership of a share implies full acceptance of the terms of association and of the decisions of the general meeting.

The liability of each shareholder is limited to the amount of capital represented by his share. In conformity with section 33 of the Commercial Code, no financial claim beyond this amount may be made on shareholders.

Article 12

Shares may be transferred by a statement of transfer signed by the transferor and the transferee and entered in the firm's books with the signature of the manager or, where there are several managers, of one of them number. The company may require the signature and capacity of the parties to be attested by a notary. No transfer of shares, even when effected by public sale or by a sale ordered by the court, to persons unconnected with the company is valid unless approved by the management. The latter must make known its decision within a month of the date on which application for the transfer was made.

The management may refuse approval of the transfer without giving reasons, but must announce the name of the purchaser and the purchase price of the share within the time limit of a month specified above.

Shares may not be acquired by persons unconnected with the undertaking unless no application has been received from a member of the staff or of the management, who enjoy a right of priority as specified below.

Should the proposed transferee not be approved by the management, the share must be acquired by the new purchaser appointed by it at a fixed price calculated by capitalising the amount of the dividend for the previous year (after deducting taxation) on the basis of a rate equal to the current rate of interest charged on advances by the Bank of France, increased by two per cent.

A right of priority for the purchase of shares is given to the members of the staff and to the managers in the proportion of half each, either group being entitled to exercise the right of which the other has not availed itself. Priority is reserved for members of the staff where single shares are for sale and if all the managers between them already hold 9,000 shares.

If the staff fails to exercise this right of priority in full or in part it passes to the managers. In every case the staff must be notified of the number of shares available.

Should the management fail to appoint a purchaser within the month,

the transfer applied for must be regularly concluded in the manner described above.

In the event of the death of a shareholder, and whoever his heirs or representatives may be, the management has the full right to acquire or assign to a purchaser of its choice the shares owned by the deceased at a price fixed as provided in the present article and subject to the procedure described above.

The right of purchase is exercised by the management by notifying the said heirs and representatives through the medium of an extrajudicial deed. This deed automatically transfers the ownership of the shares to the managers or such persons as they may appoint.

Article 13

The shares may not be divided by the company and must be transferred in the name of a single proprietor. If a share is owned jointly by several persons these must appoint one of their number to represent them

Article 14

The heirs, representatives and creditors of a shareholder may not under any pretext have the property or securities of the company placed under official seal, apply for the company's dissolution or partition, or interfere in any way in its management. They must rely for the exercise of their rights on the balance-sheets and on the decisions of the general meeting.

To sum up, therefore, the company's shares may not be freely donated or bequeathed by will or sold directly. The managers have a priority claim as to the purchase of half the shares available, provided that they may not between them hold more than a quarter of all the company's shares, the other half being reserved for the active staff. No transfer of shares is valid without the approval of the management, which need not give reasons for withholding such approval. Lastly, company rules have been drawn up, subject to amendment by decision of the general meeting, laying down the following principles for the acquisition of shares by the staff: men and women manual workers, junior shop assistants, odd men and ordinary employees may hold not more than five shares, assistant heads of departments and equivalent grades, heads of small services and equivalent grades not more than twelve shares, heads of departments and heads of assimilated services not more than twenty shares, and administrators not more than fifty shares.

These rules make it impossible for any member of the lower-grade staff to obtain a seat on the supervisory board prescribed by law¹, since Article 30 of the company's articles of association

¹ Section 5 of the Act of 24 July 1867.

provides that only persons holding not less than twenty shares are eligible for membership of the supervisory board, a condition which cannot be fulfilled by any of the staff except heads of departments, heads of assimilated services and administrators. On the other hand, all shareholders may be represented at the annual general meeting, provided that they combine to form groups holding between them the requisite 100 shares entitling them to representation, one person acting as delegate for the rest. In practice this right of representation was exercised at the early meetings, but has since fallen into abeyance. On the other hand, every shareholder, whatever the number of his shares, is entitled to attend extraordinary general meetings. These may be convened by the supervisory board only for one of the following reasons: increase or reduction of the firm's registered capital, and prolongation or dissolution of the company, the latter being possible only if the management and supervisory board confirm the loss of nine-tenths of the whole registered capital. It is therefore highly probable that there will be no occasion to call an extraordinary general meeting before the expiry of the ninety-nine years originally fixed for the life of the company.

It is thus clear that although the founders of the company wished to enable all the members of the staff to acquire a share of the capital of the undertaking, they had no intention of allowing them to participate in its management¹.

At the end of 1933 the number of persons holding shares in the Samaritaine Stores Company was as follows:

2,745 employees	holding	14,591 shares
4 members of Supervisory Board	„	90 „
2 managers	„	3,319 „
Cognacq-Jay Foundation	„	18,000 „
<hr/> Total: 2,752 shareholders	„	36,000 „

Of the 2,745 employee shareholders, 1,759 were on the active staff and 986 had left the firm owing to resignation, dismissal or super-annuation.

¹ This marks the essential difference between the articles of association of the Samaritaine Stores and those of the joint stock companies formed on the principle of labour co-partnership under the Act of 26 April 1917. The latter provide for the compulsory representation of the staff at general meetings by elected representatives, and one or more seats on the board are reserved for staff delegates.

The shares held by the staff were distributed as follows:

553 employees holding	1 share each	553 shares
379 "	2 shares	758 "
289 "	3 "	862 "
275 "	4 "	1,100 "
456 "	5 "	2,180 "
282 "	6 "	1,692 "
77 "	7 "	539 "
62 "	8 "	496 "
35 "	9 "	315 "
32 "	10 "	320 "
27 "	11 "	297 "
101 "	12 "	1,212 "
21 "	13 "	273 "
4 "	14 "	56 "
26 "	15 "	390 "
2 "	16 "	32 "
4 "	17 "	68 "
4 "	18 "	72 "
76 "	20 "	1,520 "
1 "	21 "	21 "
7 "	23 "	161 "
4 "	40 "	160 "
25 "	50 "	1,250 "
3 "	53 "	159 "
2,745 employees holding in all		14,591 shares

The rates for the purchase or transfer of shares as fixed under the company's articles were: from 1 January to 6 February 1933 (based on trading results for 1931-1932), 3,640 francs, and from 7 February to 31 December 1933 (based on trading results for 1932-1933), 3,620 francs.

Profit Sharing

The share of the staff in the profits of the undertaking is regulated under Articles 48 to 53 of the company's articles. The total proportion of profits to be distributed among the staff is fixed invariably, the general meeting having been deprived in advance of the right to amend the provisions and articles relating to the objects of the company, its management, and the distribution of profits. The provisions concerning profit sharing are as follows:

(1) An appropriation of one-quarter of the net profits shown on the balance-sheet is made for reserves. This appropriation may cease when the total amount of the reserves has reached 60,000,000 francs if the management considers that the existing circumstances do not require a higher figure, but must be resumed as soon as the reserves fall below 60,000,000 francs.

(2) A further appropriation is made of the amount necessary to pay interest at 5 per cent. on the nominal value of the shares.

Should the profits for any trading year be insufficient to provide this interest, the balance may be made up from reserves.

(3) Any profits remaining after these appropriations are distributed as follows:

15 per cent. to the managers in the proportion of 8 per cent. to the first and 7 per cent. to the second if there are two, and 6 per cent. to the first and 4½ per cent. to each of the others if there are three;

20 per cent. distributed as a dividend on the capital;

65 per cent. entrusted to the management for distribution among the staff in accordance with the company rules appended to the articles of association, which may not be amended either by the present managers or by their successors¹.

Before considering these company rules, it may be noted that in accordance with the principles which inspired the provisions relating to the supervisory board the articles specify that this 65 per cent. share in profits shall not confer on the beneficiaries any right of interference in or supervision over the affairs of the company or the fixing and distribution of dividends. The beneficiaries must submit to the decisions of the general meeting and management as regards the determination of the share to be assigned to them out of annual profits. It is also provided that the distribution of profits shall not give the beneficiaries any rights in respect of the registered capital of the company either during its life or after its dissolution.

Generally speaking, all the members of the staff of the Samaritaine Stores who have had three years' continuous service with the firm at the end of the trading year and are over twenty-five years of age are entitled to a share in annual profits².

Nevertheless, the management has the right to withhold at its discretion all or part of the profit-sharing bonus from any member of the staff, without giving reasons for its action, while only those employees who have been present throughout the year are entitled to participate in the scheme. The money made available by the

¹ These rules were amended by Deeds of 11 February 1918, 22 May 1919, 2 December 1920, 7 November 1923, and 19 October 1925. The provisions described above are those in force at present

² The conditions originally required seven years' service and twenty-seven years of age, subsequently reduced to five years' service and twenty-five years age

withholding or reduction of these bonuses goes to increase the bonuses paid to other members of the staff.

The bonuses are distributed on the following basis:

- (a) one unit each to manual workers, male and female, junior shop assistants and odd men;
- (b) two units each to ordinary employees (salesmen, sales-women, etc.);
- (c) three units each to assistant heads of departments and equivalent grades;
- (d) four units each to heads of small services and equivalent grades;
- (e) five units each to heads of departments and equivalent grades;
- (f) eight units each to administrators;
- (g) a number of units equal to one-sixth of the total as specified above placed at the disposal of the management.

The amount of profits available for distribution divided by the sum total of all these units gives the value of each individual unit, the management being entitled in all cases to alter the number of units due to employees of any category. As regards the units placed at the disposal of the management, these are distributed at its discretion as end-of-year bonuses to members of the staff who are not yet entitled to a profit-sharing bonus.

Members of the staff who leave the firm for whatever reason and at whatever time of the year thereby forfeit any claim to a share in the current year's profits. Further, in the case of a direct breach of contract the profit-sharing bonus due to the employee is not taken into consideration in calculating the indemnity due from the party responsible for the breach of contract, a fact which must be expressly stated in the agreement signed between the management and the individual employee on engagement.

Each unit of profit-sharing bonuses is personal and non-transferable, but the units are not paid up in full. As will be seen below, a fraction of each is appropriated and paid into an account with the National Old-Age Pension Fund ¹.

The amount of these yearly payments, made in the individual employees' own names, varies with the value of the bonus unit

¹ The retiring age for members of the Samaritaine staff is fifty years for women and fifty-five for men. In exceptional cases heads of departments and services and administrators may retain their posts up to a later age.

and is fixed year by year by the management. Employees may nevertheless be permitted, on making application in writing, to have these annual amounts paid into a special deposit account opened with the firm itself. The sums in this account are compulsorily repayable only on the departure of the employee, the application forms specifying the conditions under which the account bears interest.

THE FOLLOWING TABLE SHOWS THE DISTRIBUTION OF PROFIT-SHARING BONUSES AMONG THE STAFF OF THE SAMARITAINE STORES FOR THE TRADING YEAR 1932-1933

Category of persons participating	Number of units allocated to staff	Number participating	Total number of permanent staff	Percentage of total staff participating	Persons excluded from participation owing to long absence from work	Persons excluded from participation but granted a substitute bonus representing	The whole profit-sharing bonus	Half the profit-sharing bonus
<i>1 unit</i> Odd men, manual workers and equivalent grades	1,903	1,903	2,842	67	57	1	33	
<i>2 units</i> Salaried employees	6,400	3,200	5,512	58	107	1	46	
<i>3 units</i> Assistant heads of departments or services	1,194	398	401	99	3	1	—	
<i>4 units</i> Heads of small departments or services	88	22	22	100	—	—	—	
<i>5 units</i> Heads of departments or services	545	109	110	99	1	1	—	
<i>8 units</i> Administrators	224	28	28	100	—	—	—	
Units placed at the disposal of the management for distribution as end-of-year bonuses	1,726 ¹							
Total	12,080	5,660	8,915	63	168	4	79	

¹ The 1,726 units placed at the management's disposal were divided among 2,602 employees who were under 25 years of age or had completed less than 3 full years' service at 31 July 1933 in amounts varying according to length of service between 500 and 3,800 francs.

During the past five years the following amounts have been distributed as dividends to shareholders and profit-sharing bonuses:

Year	Shareholders' dividend Fr.	Total amount of profits distributed Fr.	Value
			per unit Fr.
1928-1929	263 78	25,012,858 95	2,778
1929-1930	286 50	27,671,076 65	2,955
1930-1931	277 99	26,675,807 35	2,603
1931-1932	281 62	27,099,640 25	2,439
1932-1933	279 58	26,861,871 65	2,303

Thus a good salesman who earned the average remuneration of 12,600 francs in 1933 received an additional sum of 4,600 francs representing the value of his two-unit share of profits, and a further 1,650 francs in dividends and interest if he owned the five shares which he was entitled to acquire.

SOCIAL INSURANCE

Since the coming into force of the Social Insurance Act of 30 April 1930, the special insurance scheme of the Samaritaine Stores has been adapted to conform to the statutory provisions of the law.

Accident Insurance

All the employees of the Samaritaine Stores, whether covered by the national social insurance scheme or not, are protected against occupational risks in conformity with the current provisions of the law.

The non-industrial accident risks of employees insured under the national scheme are covered under the same conditions as their sickness risks by the funds to which they belong, provided that they fulfil the statutory conditions as to contributions entitling them to benefits.

Employees who are not covered by the national scheme are not entitled to compensation of any kind for non-industrial accidents. If the accident is due to a third party the victim may obtain compensation from that party or from his insurance company, and if to personal carelessness or chance the victim bears his own medical and pharmaceutical expenses and loss of pay during his absence from work. Most of the employees who are not covered by the national scheme, however, belong to a mutual benefit society (this having been compulsory for the whole staff before the Social

Insurance Act came into force), which bears part of the expenses arising out of non-occupational accidents.

The Solidarity Fund of the Samaritaine Stores¹, financed by appropriations from profits, may in particularly deserving cases assist victims of accidents who are not entitled to compensation.

Sickness Insurance

Until the coming into force of the Social Insurance Act, employees and workers of both sexes who were absent from work through sickness received half their wages for the first month and a quarter for the three following months. As the Act of 30 April 1930 covers commercial establishments and goes beyond these provisions, the latter now apply only to employees who are not covered by the Act.

Old-Age Insurance

The Samaritaine Stores provides old-age pensions for all its permanent employees whether insured under the national scheme or not, by means of deductions made in accordance with its rules from profit-sharing or end-of-year bonuses.

These sums are paid every year as follows:

- (a) until the employee reaches forty years of age, into the individual pension account opened in the name of each employee with the National Old-Age Pension Fund; the capital is reserved on behalf of the insured person's heirs, but permission may be obtained to alienate it and the pension may be claimed at fifty years of age by women and fifty-five years by men;
- (b) When the employee reaches the age of forty years and the sum standing to his reserved capital account with the National Old-Age Pension Fund is enough to provide a pension of at least 3,000 francs, payment may at his own request be made into a deferred deposit account entered in the company's books, and yielding interest which may be drawn yearly or left to swell the capital (present rate of interest, 5 per cent. less 12 per cent. income tax), and which must be repaid to the person concerned when he leaves the firm².

¹ This Fund is described in the section dealing with welfare schemes

² At 31 December 1933 accounts of this type had been opened for 744 employees with total deposits amounting to 13,802,216 90 francs. The

In the case of employees covered by the national social insurance scheme, the fraction of the worker's contribution assigned annually by the accumulation fund to cover the risk of old age may, at their own request, be deducted from their profit-sharing or end-of-year bonus. This fraction is paid in cash at the same time as the bonus and their social insurance contribution is reduced by an equivalent amount.

Employees who leave the firm before reaching the age limit are entitled, on reaching the age (fifty or fifty-five years) at which it becomes repayable, to the pension formed by their account with the National Old-Age Pension Fund, to the income they can obtain from the investment of the capital representing their deferred deposit account, and also, if they are insured under the national scheme, on reaching the age of sixty years to the pension formed by the employers' and workers' social insurance contributions paid since 1 July 1930. Employees who retire from the firm on reaching the age limit receive the same benefits as the others. Those who have completed more than fifteen years' service with the company receive an addition to their pensions and income provided by the firm, varying in amount year by year and bringing the total pension of each pensioner up to 300 francs for every year's service, whatever the post occupied at the date of retirement. These supplementary pensions are paid out of a special reserve fund constituted by appropriations from annual profits on the basis of mortality tables. The pensions are paid by instalments, quarterly in arrears, on the first of February, May, August and November each year.

Up to 1922 the supplementary pensions were constituted by payments on the alienated capital system into the National Old-Age Pension Fund on account of the individual employees. The gradual raising of the rates of these supplements however, resulting in a considerable increase in the charges on the firm, led to the suspension of direct payments into the National Old-Age Pension Fund and the substitution of an annual assessment system.

The supplements payable to members of the national scheme between the date of their leaving the firm and that on which they become eligible for their social insurance pension, i.e. on reaching

employees may also deposit in these accounts, to be repaid immediately on demand, all their available funds up to a limit of 30,000 francs, interest being paid at 6 per cent. At the same date 3,783 employees were availing themselves of this facility, their total deposits amounting to 37,760,205 20 francs.

sixty years of age, are reckoned as if no social insurance payments had been made. As soon as these pensioners reach the age of sixty years, however, their annual supplement is reduced by the half of the pension corresponding to the payments made to social insurance during the employee's service with the company. No account is taken of supplements granted by social insurance funds to the pensions of mothers or fathers who are family breadwinners and have supported at least three children up to the age of sixteen years, or of the supplements granted to ex-servicemen belonging to an ex-servicemen's friendly society. When the provision for the minimum State pension guaranteed after five contribution years comes into force, account will be taken of half the supplement granted in proportion to the number of contributions paid during the employee's service with the company.

Invalidity

The articles of association of the Samaritaine Stores make no special provision for safeguarding those of their employees who are not covered by the national social insurance scheme against invalidity. Disablement due to industrial accident and covered by the Act of 1898 gives rise to compensation from the firm's accident insurance company. Other disabled persons may, if their material circumstances so require, apply for assistance to the Solidarity Fund of the Samaritaine, while the firm also makes every effort to provide employment for the wife or husband of the disabled person and for the children if they are old enough to work.

Widows and Orphans

The widows and orphans of employees insured under the national scheme enjoy the reversion of the capital assigned to the old-age risk under the reserved capital system; and if the deceased fulfilled the conditions laid down by the Social Insurance Act they also receive the lump sum payable on death and orphans' pensions.

The widows of all employees, whether insured under the national scheme or not, receive the following benefits on the death of the husband and father of the family:

- (a) the reversion of the reserve capital paid into the individual account of the deceased with the National Old-Age Pension Fund;
- (b) the reversion of the capital paid into the deferred deposit account of the deceased;

- (c) the profit-sharing bonus that would have been due to the deceased for the current year, provided that he actually worked for at least six months of the year in which death occurred;
- (d) family allowances granted by the firm or by the Cognacq-Jay Foundation until the child or children reach the age of fifteen years.

Widows who are left in difficult circumstances may be granted assistance by the Solidarity Fund, and wherever possible the firm provides employment for the widow and for the orphans if they are old enough to work. It may be noted, however, that in many cases the widows themselves are already employed in the Samaritaine Stores and are thus entitled to their own pension.

Maternity Benefits

Women employees of the Samaritaine Stores who are not insured under the national scheme are entitled on confinement after at least one year's service with the firm to a maternity leave indemnity for two months, paid as a lump sum on the following scale according to their age and position in the firm.

Employees in posts carrying the right to a profit-sharing bonus at the rate of		
Two units or more	One unit	
	Fr.	Fr.
Under 17 years	600 00	600 00
17-21 years	750 00	750 00
21-23 years	883 35	800 00
Over 23 years	1,000 00	900 00

Women insured under the national scheme receive the statutory maternity allowances at the rate of half their wages for the six weeks before and six weeks following confinement, provided that they are actually absent from work, and the repayment of their confinement expenses according to the scale applied by their primary sickness fund.

In the infrequent event that the indemnities received by women insured under the national scheme in the form of the allowance of half their wages and repayment of their confinement expenses are together less than the maternity leave indemnity paid in the form of a lump sum by the firm to its other women employees, the difference is made up by the firm itself.

As will shortly be seen, women employees of the Samaritaine Stores, whether insured under the national scheme or not, are

entitled after a full year's service to a baby's bonus of 1,000 francs (formerly called a layette bonus), and may also enter the Cognacq-Jay Maternity Home administered by the Foundation, where they have a preferential right of admittance but are required to pay the ordinary fees.

WELFARE

Like most large-scale industrial and commercial undertakings, the Paris department stores possess highly developed welfare schemes. This policy is to the advantage of the firms themselves, since they have a special interest in retaining the services of a stable staff on whom a large share of the responsibility for the efficient conduct of the undertaking rests, even in the lower grades. The secret of the profits of big department stores lies, as explained above, on large and quick sales, and the success of the undertaking therefore hangs very largely on the intelligence and skill of its salesmen and saleswomen, and to a lesser degree on its delivery staff. The widespread sense of a community of interests prevailing among the staff has given rise to a marked "family" spirit in the undertaking. "Never forget," said Mr. and Mrs. Cognacq, in acknowledging assurances of the devotion of their staff in 1919, "that all of you are really working each for all and all for each. So in your own interests work keenly, and do not put up with chatterboxes and idlers. We want no drones to eat the honey of the hive."

This idea of a community of interests is closely linked with the principle of authority already referred to in several connections. New members are not accepted into the "family" unless they have already proved their worth in similar employment elsewhere and are thoroughly dependable from a moral standpoint. As a general rule they are not admitted to the enjoyment of their full rights until after a probationary period of some length. Thus in undertakings like that under consideration here in which a profit-sharing scheme is in operation, profit-sharing bonuses are not granted until certain conditions as to age and length of service are fulfilled. Moreover, the service must be continuous, and the management reserves a discretionary right to decide whether the bonus shall be granted in certain cases without having to give reasons for its decision. These conditions apply to a fraction of the staff's earnings which is by no means negligible, amounting, as has already been seen, to a quarter of the total or even more.

Welfare schemes are another factor which operate in a similar direction. While it would be wrong to deny their humanitarian character, the fact remains that they, too, forge solid links in the chain which binds the staff to the undertaking. These links become more and more difficult to break as he advances in his career for the employee who eats the chief meal of the day in the shop restaurant, makes his purchases in the shop, uses the firm's playing fields, attends its lectures and classes, avails himself of the services of its maternity home, nursery and babies' home for his family, and resorts to its hospitals and convalescent homes in case of sickness. Without his being fully conscious of the fact, his whole life centres round the firm which employs him and which gradually becomes the focus of all his preoccupations. In the words of Mr. Frances Ambrière, he gets into the habit of "thinking shop", and in this fact probably resides one of the greatest elements of the strength of the big department stores and one of the major reasons for their success.

To return to the undertaking which is the immediate subject of this study, the following pages will deal first with those welfare schemes which operate actually at the place of work or in close connection with it, and secondly, with the whole of the institutions financed by the Cognacq-Jay Foundation¹. The distinguishing features of the latter are that their benefits are not confined to the Samaritaine staff, and that all their services must be paid for, although the fees charged often cover only a fraction of the expense actually incurred by the beneficiary.

Indemnities and Allowances

These take the form of wedding bonuses, babies' bonuses, relief granted by the Solidarity Fund, and family allowances.

The flat rate for the wedding bonus granted to all women employees of the Samaritaine with at least one year's service on the date of their marriage was 1,000 francs throughout 1933, the total amount paid under this head during the year being 198,000 francs.

The flat rate for the babies' bonus, formerly known as a layette bonus and granted on the birth of each child to every woman who has been employed for at least one year at the Samaritaine Stores,

¹ The Foundation bears the two names of Cognacq and Jay, the latter being the maiden name of Mrs. Ernest Cognacq.

was also 1,000 francs throughout 1933. The total amount paid during the year was 132,000 francs.

As already stated, the firm has also set up a Solidarity Fund financed entirely by annual appropriations from yearly profits. The assistance granted to members of the staff implies no obligation on their part. During 1933 assistance was given in 623 cases, representing a total of 267,778.75 francs, or an average of 430 francs in each case.

Where good reason can be shown, the firm also fairly frequently grants advances varying between 500 and 3,000 francs on the profit-sharing bonuses for the current year, which are payable about 15 November each year. These advances can be recovered without difficulty when paying out the bonuses.

Lastly, there is a family allowance scheme. Allowances are paid until the child reaches the age of fifteen years and are not suspended in the event of the death or superannuation of the father or mother.

On 31 December 1933 the number of families in receipt of family allowances was as follows: 2,617 families with one or two children receiving allowances from the Samaritaine Stores alone; 218 families with more than two children receiving allowances from the Samaritaine Stores and from the Cognacq-Jay Foundation; 62 families with more than two children receiving allowances from the Cognacq-Jay Foundation alone, making a total of 2,897 families. At the same date, the number of children on account of whom family allowances were being paid was as follows: first children, 2,642; second children, 875; third children, 259; fourth children, 85; fifth children, 29; sixth children, 16; seventh children, 7; eighth children, 3; ninth children, 2: making 3,918 children in all.

The total amount paid out in family allowances to the Samaritaine staff in 1933 was 3,379,275 francs for first and second children, and 668,350 francs for all others, making a grand total of 4,047,625.

The Act of 11 March 1932 introducing compulsory family allowances for all wage earners is not yet applicable to the Samaritaine Stores, the Decree applying the Act to the fancy goods trade not yet having been published. The differences between the allowances now paid jointly by the Samaritaine and the Foundation and the statutory rates which will be payable after the Act comes into force are shown in the following table:

Number of children in family	Annual allowance		Annual difference
	Paid by Samaritaine and Cognacq- Jay Foundation	Statutory rates payable by an equalisation fund	
1	900	360	540
2	2,100	840	1,260
3	3,600	1,440	2,160
4	5,400	2,400	3,000
5	7,500	3,360	4,140
6	9,900	4,120	5,580
7	12,600	5,280	7,320
8	15,600	6,240	9,360
9	18,900	7,200	11,700

Miscellaneous Welfare Schemes

The firm has installed an infirmary and babies' room on the seventh floor of the main building and served by a special lift. Consultations are given by a medical practitioner, assisted by the head nurse and a laboratory assistant, from 10 to 12 each morning, and are attended by the new employees who must undergo a medical examination before being definitely engaged, and employees who are unwell or have been injured¹.

Next to the infirmary dressing room, the doctor's consulting room and the waiting room, is the day-nursery containing thirty cots where nursing mothers (saleswomen or other shop employees) may leave their babies while at work. The babies may be brought every day up to the age of fifteen months and the mothers are allowed to spend three half-hour periods with them every day at 10.30 a.m., 1.30 p.m. and 4.30 p.m.². There are five nurses who look after the cots, baths and bottles, and superintend the open-air terrace where the babies are left whenever the weather is warm enough.

In addition to the welfare institutions set up by the Cognacq-Jay Foundation, which are shortly to be discussed, certain other social services are also available to the staff. Beds for the children of members of the staff are reserved in two preventive institutions, *L'Enfant au Grand Air* at Royan and the *Louise de Bettignies* Home at St. Martin de Ré. The Bligny Sanatorium and that

¹ Fernand LAUDET: *La Samaritaine*.

² These provisions are more favourable than those laid down by the Act of 5 August 1917, which provides that the mother shall be allowed one hour daily during working hours to nurse her child until it is twelve months old.

founded by the Villepinte Institution also reserve twenty-five and three beds respectively for the Samaritaine staff, while in Paris itself seven founders' beds at the St. Joseph Hospital for surgical and general cases and three at the Bon Secours Hospital for surgical cases are also available.

Facilities for games and sports are provided for the staff of the Samaritaine Stores as for that of other big Paris stores. There is a gymnasium for physical culture and gymnastics on the top storey and on the flat roof of the clothing reserves warehouse on the Quai des Célestins, and the firm also possesses a training ground and playing fields at Eaubonne (Seine-et-Oise). There is a staff sports club which has a membership of 1,500 at present, under the leadership of one man and one woman physical training instructor. The playing field is, of course, used only on holidays, but the gymnasium is attended from 7 to 8 a.m. and from 8 to 9 p.m., different days being fixed for men and women respectively.

Lastly, to close the list of the recreational facilities provided for the Samaritaine staff, it may be mentioned that there is a dramatic and musical society with its own studio in Paris and a membership some 600 strong.

The Cognacq-Jay Foundation

The Cognacq-Jay Foundation, approved as a public utility institution by a Decree of 2 December 1916, was the subject of another Presidential Decree shortly after. In order to provide the Foundation with personal estate and regular funds, Mr. and Mrs. Cognacq made over to it by deed of gift on 27 December 1916 various movable assets, some house property in Paris and the neighbouring municipalities of Rueil and Levallois-Perret, and various securities including shares to a value of 18,000,000 francs, or half its total capital in the Samaritaine Stores Company. The Presidential Decree of 20 February 1917 authorised the chairman of the Foundation to accept this gift, valued for purposes of registration at a total of 39,898,107 francs¹.

The articles of the statutes concerning the aims and procedure of the Foundation are given below:

Article 1

The Cognacq-Jay Foundation is set up by Mr. and Mrs. Ernest Cognacq with the following objects:

¹ Albert TROMBERT: *La participation aux bénéfices*, Appendix VI.

1. To provide for the foundation of a home, hospital or maternity home which shall be called the Cognacq-Jay Home, Hospital or Maternity Home.

2. To provide for the continuation, maintenance and, if necessary, development of the following existing welfare institutions:

- (a) the home for the aged set up at Rueil by Mr. and Mrs. Ernest Cognacq for retired commercial employees, residence in which is free for retired employees of the Samaritaine Stores;
- (b) the Samaritaine Babies Home, also at Rueil, which brings up twenty-five children free of charge up to the age of three years;
- (c) the group of cheap dwellings at Levallois-Perret, consisting of seven blocks situated in the rue Danton, rue Ernest Cognacq and rue Baudin, intended to provide cheap and healthy dwellings for large families.

3. To participate within the limits of its available funds in such welfare schemes for the relief of war victims, already in existence or to be launched in future, as may be designated by the Board, e.g. orphanages for war orphans, assistance to disabled and invalidated ex-servicemen, vocational retraining, assistance to the blind, relief to large families, the building up of broken homes.

4. Lastly, to create, develop or maintain, subject to the funds available and irrespective of any political or denominational considerations, all institutions or organisations for social welfare.

The headquarters of the Foundation shall be in Paris.

Article 2

During the lifetime of the founders and until the death of the surviving founder, the Foundation shall be represented and administered by a Board of Management consisting of ten members.

The first Board of Management shall consist of Mr. and Mrs. Ernest Cognacq, founders, Mr. Gabriel Cognacq, and other members appointed by the founders.

The members of the Board shall cease to serve only on death or resignation. In the event of a vacancy arising out of either of these causes, it shall be filled by a person appointed by the founders or surviving founder.

Article 3

After the death of both founders, the Board of Management of the Cognacq-Jay Foundation shall be composed of not less than twelve and not more than fifteen members who shall include persons chosen from the following bodies (as far as possible one from each): the Institute, the Council of State, the Magistrature or the Bar, the Tax Inspection Department, and the head manager of the Samaritaine Stores.

Should Mr. and Mrs. Ernest Cognacq die without appointing the new members to serve on the Board after their death, the members serving at the time shall themselves appoint others to bring their number up to twelve or fifteen.

The members appointed after the death of the founders shall also hold office until death or resignation, except in the case of the Manager of the Samaritaine Stores, who on giving up his post with the company shall be replaced by his successor.

Nevertheless, Mr. Gabriel Cognacq, who shall represent the management of the Samaritaine Stores as head manager after the death of the founders, shall continue to serve on the Board of the Foundation even after he has ceased to be manager of the Samaritaine Stores.

Article 4

The chairmanship of the Board shall be held *ex officio* by Mr. Ernest Cognacq and after his death by Mrs. Ernest Cognacq, and after the death of both founders by Mr. Gabriel Cognacq.

Subsequent chairmen shall be chosen by the Board from among its members.

The Board shall complete its Executive Committee by appointing from among its members a vice-chairman, treasurer and secretary, subject during the lifetime of the founders to their approval.

With the exception of the founders and of Mr. Gabriel Cognacq, who shall retain their chairmanship for life, the chairmen, vice-chairmen, treasurers and secretaries of the Foundation shall be elected for a term of three years but shall be re-eligible.

After the death of Mr. Gabriel Cognacq the head manager of the Samaritaine Stores shall be an *ex officio* member of the Board so long as he continues to hold his post.

Article 5

The Board shall meet as often as is required for the conduct of the Foundation's affairs, at least once every three months, and as convened at any time by the chairman or at the request of three of its members.

Decisions shall be taken by a majority vote of the members present and shall not be valid unless a majority of the members in office are present. In the event of a tie, the chairman, or in his absence the vice-chairman, shall have the casting vote.

Minutes shall be taken of the meetings.

The minutes shall be signed by the chairman or in his absence by the vice-chairman and secretary.

Article 6

The duties of the members of the Board of Management shall be honorary.

The institutions maintained by the Foundation are described below in geographical order, beginning with those in Paris.

The maternity home specified in Article 1 of the rules of the Foundation as one of its primary objectives has been set up in Paris. It contains ninety-five beds and deals with 2,000 confinements annually, the normal stay in the home being a fortnight. One of the special features of this institution, which also characterises several other institutions run by the Foundation, is that it is reserved for the wives of employees in department stores and provision stores and of insurance and bank employees, preference in

admitting patients being given to the Samaritaine staff. The fees payable for a fortnight in the home, including confinement expenses and attendance, are 390 francs for a single room and 360 francs for a double room. The staff consists of four doctors, five midwives, nineteen nuns and sixty other assistants.

The Foundation has a considerable achievement to its credit in the sphere of working-class housing. One group of its cheap dwellings was built in Paris itself in 1931. They comprise 300 dwellings at rents varying according to the storey and position between 1,400 and 3,500 francs a year. The flats are in four parallel blocks separated by broad courtyards and are intended for young couples. They consist of two rooms and a kitchen, with a cellar and small shed for each tenant. The other group of houses is at Levallois-Perret in the immediate vicinity of Paris. These are also of recent construction having been completed in 1930, and are reserved for large families. They comprise 314 dwellings of two or three rooms and a kitchen, hall and the usual offices. There is a large square planted with trees which serves as a playground for the children, who number between 700 and 800 at present, and as in the Paris flats each tenant also has the use of a cellar and small shed. Rents vary between 725 francs and 2,250 francs a year with an optional quarterly subscription of 40 francs for the use of the central lavatories, which contain baths and showers. Employees of the Samaritaine Stores are given preference in allotting flats in both these groups of dwellings.

Several important institutions supported by the Foundation, comprising a Babies' Home, a Convalescent Home, and a Home for the Aged, have been set up near Paris at Rueil, in grounds adjoining the Chateau de Malmaison.

The Babies' Home receives about thirty babies who must be the children of women employees of the Samaritaine Stores or of widowers employed at the Stores or whose deceased wives were employed there as manual workers or salaried employees. The babies must be medically examined before admittance and must have been weaned at least a fortnight before. They are maintained free of charge, but their parents do not receive the family allowance which would otherwise be payable (75 francs a month for the first child, 100 francs for the second, 125 francs for the third, etc.). From the age of three to six years the children are placed in a special nursery, which also has thirty beds; this is in the same

building, but independent of the Babies' Home, and makes a uniform charge of 90 francs a month for each child.

The children of widowers whose wives were employees or workers at the Samaritaine Stores, but who are not employed there themselves, are maintained free of charge in the Babies' Home, but are charged for at the normal rate in the nursery home. Cases of this sort are, however, exceptional and can only arise when the mother dies after the child has been admitted to the Babies' Home or nursery, since as a rule they accept only the children of women workers or employees actually employed at the Samaritaine at the time.

The Convalescent Home is also reserved for the staff of the Samaritaine Stores. It accepts only girls and young women, who may spend their holidays there provided that room is available. There is accommodation for twenty-two boarders, each of whom may stay as a general rule for a maximum of three weeks at a daily charge of 8 francs.

The Home for the Aged is open to all former employees in the fancy goods trade and allied occupations and industries, although a prior right of admission is always reserved for the staff of the Samaritaine Stores. Applicants for admission must be over sixty years of age and have spent their working life in Paris or in the department of the Seine. The Home can accommodate 115 persons and makes an annual charge of 1,800 francs for a single room and 1,200 francs in all other cases. Married couples pay a joint fee of 2,400 francs, for which they receive a larger room. All the inmates are entitled to use the park, reception rooms and library in common.

Two other establishments endowed by the Foundation are situated outside Paris at Argenteuil and near Champagne-sur-Seine. The Apprenticeship School at Argenteuil was set up with a view to training girls as lingerie-makers, embroiderers, dressmakers or makers of ready-made clothes. In addition to serving their apprenticeship in these trades, the girls at the Argenteuil School also attend classes in cutting, designing and housewifery, and receive French, English and arithmetic lessons. The School takes 120 girls, who must either be orphans or without responsible guardianship from the age of thirteen to eighteen years. A monthly boarding fee of 80 francs, plus personal expenses, is payable by the girl's family or by the appropriate welfare organisation. After an apprenticeship lasting about eighteen months according to their individual aptitude

and industry, they are provided with paid work, the proceeds of which enable them to pay their fees, which are maintained at the same rate, and later to provide for their own personal needs. Any surplus is paid into a savings bank account opened in each girl's name and is drawn by her on leaving the school.

Hours of work in the apprenticeship workrooms are seven in the day, meals, classes and recreation occupying the rest of the pupil's time. Saturday afternoon is a half-holiday and is used by the girls to do their personal jobs. After completing the various apprenticeship courses, i.e. when they are about eighteen years of age, the girls either return to their families, where the latter are able to receive them, are placed in employment if they so desire, or are given employment as saleswomen or manual workers in the Samaritaine Stores. Those who are too delicate to live in Paris are found employment as dressmakers or lingerie-makers in the provinces. It may be noted that day girls are also admitted to the same classes.

The Argenteuil institution is not only an orphanage, another part of the building being installed as a boarding house containing fifty rooms for girls who work at the Samaritaine Store but who have no homes in Paris. The price charged for board and lodging is 125 francs monthly for juniors and 250 francs for saleswomen.

One of the most interesting and useful of the Foundation's institutions is the Horticultural School of Pressoirs-du-Roy, approved as a public utility institution and situated near Champagne-sur-Seine in the department of Seine-et-Marne on an estate presented by Mr. and Mrs. Edmond Fabre-Luce¹. This is an apprenticeship school intended to provide a thorough training for boys wishing to enter agriculture as gardeners, flower-growers, market gardeners, nursery gardeners, or gardening overseers.

The School takes seventy-five pupils, chosen for preference from among children belonging to large families who have a taste for agricultural work and whose state of health is such as to make an outdoor training advisable. Pupils are admitted between thirteen and fifteen years of age, or at twelve years of age if they already have their elementary school certificate. The ordinary school year begins on 1 October, the apprenticeship usually lasting three years during which an annual fee of 2,400 francs is payable.

Although this is not specifically provided under the rules, the

¹ Cf. LAUDET, *op. cit.*

Foundation gives preference to children or orphans of employees of the Samaritaine Stores for admission to the apprenticeship schools.

Outside the Paris area there is another group of welfare institutions at Monnetier-Mornex in Haute-Savoie, in the immediate vicinity of Geneva. This village is situated at a height of 800 metres on the slopes of the Salève, is a suitable place for a mountain rest cure, and the Foundation owns a villa there to which, as in the case of the Rueil home, it admits girls between fifteen and twenty-five years of age employed in commercial establishments, banks or insurance companies. Here again priority is given to employees of the Samaritaine Stores. The villa is not merely a holiday hostel, and only accepts girls with a medical certificate, but it does not admit anyone suffering from contagious diseases or, as a rule, girls requiring special care. It is open throughout the year and has accommodation for about 100 girls, a daily charge of 15 francs (reduced to 8 francs for employees of the Samaritaine Stores) being made for board and lodging.

The Cognacq-Jay Foundation has also taken a lively interest from the beginning in holiday camps. Through the medium of the *Petits Savoyards et Parisiens de la Montagne*, an organisation to which Mrs. Cognacq, as a native of Haute-Savoie, was particularly attached, it sends 300 children every year to stay with approved farmers' families in the country for fifty-five days, all their travelling and maintenance expenses being paid. Two-thirds of these children are chosen by the municipalities of the twenty districts of Paris and the rest by the chairman of the organisation in agreement with the Foundation. An equal number of children are also sent year by year to spend their holidays in the department of Charente-Inférieure and in the Island of Ré, the original home of Mr. Ernest Cognacq.

Lastly, mention must be made of the fifty bursaries awarded at the St. Nicolas School in Paris, at which elementary education and vocational training are provided. These bursaries, worth 1,300 francs each, are reserved for the sons of employees of the Samaritaine Stores.

The Cognacq-Jay Endowment for large families, amounting to 2,250,000 francs a year, and the Endowment for young French married couples, which has an annual income of 2,000,000 francs, are administered by the French Academy, but it would be outside

the scope of this study to describe them in detail here. The same is true of the Cognacq-Jay Museum which adjoins the *grands boulevards* branch of the Samaritaine Stores and has been bequeathed to the City of Paris.

CONCLUSION

In the course of this study attention has been drawn to the principal characteristics of industrial relations in department stores. It has been shown in examining the working of a department store how large a share of responsibility for the conduct and success of these undertakings rests with the staff, even in the lower grades, and how in order to organise the activities of the various departments and services without impeding them, the stores have had to weld their staff into a uniform community while allowing a wide measure of independence to the separate parts. In the particular firm taken as an example, attention has been drawn to the part played by the profit-sharing scheme and the steps taken to enable the staff to acquire shares in the undertaking, and also to the steady improvements made in an already highly developed series of welfare schemes.

This striving for uniformity, however, almost inevitably leads to a certain tendency to exclusiveness, on the part of the management and of the staff as well. The latter, feeling themselves part of a powerful organisation and living constantly in its atmosphere, come to devote not only their labours but their thoughts to the undertaking. This is the salient feature which emerges from the present study, and which gives its characteristic stamp to undertakings such as that which has been described.

The Norwegian Nitrogen Company

INTRODUCTION

Between the years 1905 and 1929 what may be claimed to be the largest hydro-electric power stations in Europe, and perhaps in the whole world, were built in a deserted district in the middle of the mountain range of the Telemark Province in southern Norway. These works now have a generating capacity of 470,000 HP. Why these immense works were constructed in such an isolated region and what use is made of the enormous amount of power generated needs some explanation however, and this is given below.

At the beginning of the present century two Norwegians—Professor Birkeland and Mr. Sam Eyde, engineer—first succeeded in perfecting a process for extracting nitrogen from the air and for fixing it in the form of nitrate fertiliser. The first stage of the process consisted in burning air with an electric arc in a special furnace built by the inventors. For this, large quantities of electricity were required. As Norway possessed enormous quantities of water power but no coal, it was decided to build the works required for the operation of the Birkeland-Eyde process in one of the largest river and lake districts of Norway in the valleys of Vestfjord and the Tinn in the Province of Telemark.

Thus it was that the building of the first works set up by the Norwegian Nitrogen Company (Norsk Hydro-Elektrisk Kvaestof-aktieselskab) to exploit the Birkeland-Eyde invention was begun in 1905 at Notodden, a small township situated a little below a large waterfall called the Svaelgfos, where even then a number of small industrial undertakings were established. Dams were constructed below this waterfall and in their immediate vicinity three power stations with a capacity of 80,000 HP. were erected. The production of nitrate fertiliser by the new process turned out to be a lucrative affair and the need for synthetic saltpetre rapidly increasing, the directors of the Company conceived a plan which at that time seemed both vast and daring. This was to acquire the right to use the Rjukan, the largest and most beautiful waterfall

in Norway, to harness this enormous quantity of water and to convert it into the electric power required for the manufacture of nitrate fertilisers.

Now this scheme entailed much organisation and work. In the first place, the waterfall had to be captured and power stations built in the immediate neighbourhood. Then factories for the manufacture of saltpetre had to be built nearby, for at that time (1907) electric current could not be conveyed long distances with the same facility as nowadays. But the valley through which the waters of the Rjukan flowed and which were to become the site of the various works was practically uninhabited, so besides building roads, railways and other means of locomotion for the transport of its manufactured goods, the Company was also obliged to erect the dwellings and premises necessary for a large staff of workers and technicians and, in short, to create everything required for a modern industrial community. The manner in which the Company carried out this part of its work is the main object of this study.

The undertaking rapidly proved to be a great success both from a technical and a financial standpoint and paid increasing dividends. Rjukan thus became an important industrial centre. In 1907 the population of the parish of Dal, where the works and workers' quarters were built, consisted of some 200 persons, but by 1908 it had increased to 700 and by 1914-1915 totalled 7,800 persons. The world war having considerably enhanced the marketing possibilities of the Company, the population increased to 8,900 by the end of 1917 while in 1920 it totalled 9,400 persons, the highest figure reached.

The chemical industry is, however, subject to constant evolution, and despite improvements made in the Birkeland-Eyde process the Company began to feel more and more the effects of competition due to new methods invented and applied elsewhere which ensured a more rational use of electricity. In 1926 the Company, which was then managed by its present General Director, Mr. Axel Aubert, decided to discard the Birkeland-Eyde process for the Haber-Bosch system which had met with considerable success in Germany in the works of the I.G. Farbenindustrie. This change in the technical process was to lead to a complete transformation of the whole concern. From a technical and financial standpoint it might perhaps have been wiser to abandon the nitrate works at Rjukan and to build a new plant near the sea, while linking up the new works with the sources of electricity produced in the

mountains. But the Company was loth to forsake the communities which it had brought into existence, one of which—the town of Rjukan—had over 8,000 inhabitants. It therefore chose a less drastic solution which consisted in adapting the existing plant to the requirements of the new process and constructing new works in the seaside commune of Eidanger near the town of Porsgrund. As a result of this building and reconstruction work, which was begun in 1926 and completed in 1929, the Norwegian Nitrogen Company now consists of the following establishments:

- (1) Rjukan, with three hydraulic power stations with a generating capacity of 390,000 HP. and a steam plant generating 20,000 HP. One half of the electric power generated is used for the manufacture of synthetic ammonia, nitrogen being extracted from the air and hydrogen from water by electrolysis, while the other half is used for manufacturing by means of the old electric arc process. Fifty per cent. of the ammonia produced is transformed on the spot into calcium nitrate, the rest being sent in liquid form to the new Eidanger Works where the process is completed.
- (2) The Notodden factories which use the electricity generated (80,000 HP.) by the Svaelfos and Lienfos works, and which nowadays limit their operations to the production of ammonia for despatch to the Eidanger works.
- (3) The Eidanger nitrate works which transform the ammonia received from Rjukan into nitrate acid and subsequently into calcium nitrate and other chemical products. The electric power required for these operations is supplied by a steam plant. The Eidanger works also include factories for the manufacture of soda and sulphate of ammonia.

In addition, the Company is at present building a powerful hydro-electric works at Tyin (in the Sognefjord Massive) which will have a generating capacity of 125,000 HP.

It may also be noted that the Company owns and runs at Menstad near Porsgrund a port fitted up with the most modern equipment and that it has built and operates a railway and a ferry boat service between Rjukan and Tinnoset. It also owns a factory manufacturing bituminous products.

The old and new works of the Norwegian Nitrogen Company can turn out 600,000 to 700,000 tons of fertiliser a year composed mainly of calcium nitrate. The initial capital of the Company

was 7,500,000 Kr.¹ To-day it amounts to 104,300,000 Kr. to which must be added two debenture issues amounting respectively to 50 million Krone and 20 million dollars (by 30 July 1933 these debentures had been reduced respectively to 23,400,000 Kr. and \$17,180,000 approximately). The Company is the most important industrial concern in Norway and its products are exported to all parts of the globe.

CONDITIONS OF LABOUR

Recruiting

Recruiting and training of a body of workers capable of performing the manual operations entailed in the manufacture of chemicals on a large scale gave the Company much food for thought.

Up to the end of the last century Norway had not become industrialised to any considerable extent. The large majority of the population earned a living from agriculture, fishing and shipping. From the beginning of the twentieth century, however, industrial interests developed in Norway with a rapidity hitherto unknown. But as the country had no trained industrial reserves, the new concerns had to recruit their workers from a population which was largely devoid of any experience in industrial work. The Norwegian Nitrogen Company, which from its earliest days may be said to have been a large-scale undertaking, was likewise compelled to recruit and train labour possessing very little knowledge of industrial conditions. This state of affairs naturally engendered a number of difficulties. The young peasants, fishermen and hunters, accustomed to an existence which, although rough and precarious, was not wanting in freedom, were attracted to industrial work by the prospects of regular and, to them, relatively high wages. But once in the factories they felt themselves out of place, while the discipline and restraint associated with the regular working of an industrial enterprise worried them and led to disillusionment and discontent. The social institution set up by the management, and to which detailed reference will be made later, therefore answered a real need. The Company was able to surmount its initial difficulties in this connection and nowadays has at its

¹ The par value of the Norwegian Krone is equal to 1.38 gold francs. Since 1931 it has depreciated to about the same extent as the £ sterling.

disposal a permanent supply of labour, well trained and capable of carrying on the work of an undertaking equipped with the latest technical installations.

In 1933, the aggregate staff employed in the various undertakings of the Company numbered 3,206. Of these, 836 have contracts of employment based on three months' notice. The remaining 2,370 are workers, but 305 of them are paid by the month and not by the hour.

Practically all the workers in the employment of the Company are trade unionists, the majority belonging to the Norwegian Chemical Workers' Union which is affiliated to the Norwegian Trade Union Federation. It may be noted that the Norwegian Trade Union Federation left the International Federation of Trade Unions some years ago without, however, affiliating to the Red Trade Union International. Nevertheless, the Norwegian workers' unions follow a policy of co-operation with the employers inasmuch as they negotiate and conclude with them collective agreements for the regulation of wages and other conditions of labour.

Collective Agreements

Since the end of the last century collective agreements have become general in Norwegian industry. Like the bulk of the organised Norwegian employers—at least since the establishment in 1900 of the Norwegian Employers' Federation—the Norwegian Nitrogen Company showed its willingness from the outset to establish wages and conditions of labour by means of collective agreements. Thus it is that practically all manual work performed on the premises of the Company is nowadays regulated on a collective basis.

The Company is affiliated to the Norwegian Employers' Federation. But in view of its importance it is affiliated directly to the Federation and not through the Chemical Manufacturers' Association. Collective agreements are concluded and signed on the one side by the Employers' Federation and the Company, and on the other by the Norwegian Trade Union Federation and the Norwegian Chemical Workers' Union. Negotiations relating to the amendment or interpretation of existing collective agreements are in general carried out by the Employers' Federation, one of whose higher officials is specially acquainted with the business of the Company.

Collective agreements deal in particular with wage rates, hours of work, holidays with pay, special rates for overtime, Sunday work, and particularly obnoxious work, etc. They also make

provision for workers' representation and the settlement of disputes arising in connection with the application of agreements and the performance of work.

It may here be noted that the agreement concluded between the Company and its workers does not require the employer to engage only trade unionists. Up till 1919, the collective agreements expressly stipulated that the Company was free to engage and employ any worker, whether a trade unionist or not. Later, this clause was deleted from the agreements, but it is tacitly recognised and is, moreover, admitted by the Labour Court.

Wages

Workers' wages are fixed in detailed fashion by the collective agreements. Wages are fixed at hourly rates or at pieces rates. The annual wage of an unskilled worker employed the whole year on continuous work amounts, as a rule, to about 3,000 Kr., while a worker on piece rates easily earns as much as 4,100 Kr. It may be added for purposes of comparison that the initial salary of a first-class civil servant amounts to 3,600 Kr. while that of an assistant-chief of service is 4,950 Kr.

Hours of Work

Since 1919, Norwegian legislation limits working hours in industry to forty-eight in the week and to a maximum of eight and a half a day. As the establishments of the Norwegian Nitrogen Company come under the scope of this legislation, the collective regulation of working hours referred to above is restricted to the arrangement of working hours within the limits laid down by law.

The collective agreement in force states in this respect that, failing other arrangements made by joint agreement, the working hours for work which is not performed in shifts are from 7 a.m. to 11.30 a.m. and from 1 p.m. to 5 p.m. on the first five days of the week, and from 7 to 9.30 a.m. and from 10 a.m. to 1 p.m. on Saturdays. Workers not employed in shifts thus have Saturday afternoon off, although employed forty-eight hours a week.

As the Company is engaged on continuous processes, a considerable number of its workers work an eight-hour shift once every twenty-four hours on six days a week. Being mainly engaged in supervising the plant, no provision is made for such workers to have a break for meals which may, however, be taken provided no interruption of work is entailed. Shifts working on Sunday and on

specified holidays are paid one and a half times their normal rate of wages.

The agreement empowers the Company to require their staff to work overtime within the limits prescribed by law. At the same time, it is laid down that the use of overtime must be restricted as far as possible, and in particular that no individual worker may be compelled to work an excessive amount of overtime. Furthermore, a worker is entitled to refuse to work overtime for certain definite reasons such as attendance at a trade union meeting, etc.

Overtime rates are laid down in detail in the collective agreement. The rate of extra pay for overtime varies from 25 to 100 per cent. of the usual wage.

Salaried employees in the office of the Company work from 9 a.m. to 4.10 p.m. or seven hours ten minutes a day at one single spell. During this period they may eat such food as they bring with them.

Annual Holidays

Every worker is entitled to an annual holiday of twelve consecutive working days. Workers employed under a system of rotation and working on certain specified holidays are entitled to one or two days' extra leave according to circumstances. Holidays must be taken between 1 May and 30 September, the exact date being fixed by the head of the undertaking, who is required to notify the worker at least a fortnight in advance.

Once a year the worker is entitled to a *holiday bonus*, which is usually calculated by multiplying 4.2 per cent. of his hourly wage by the number of hours actually worked by him in the service of the Company during the previous year, provided he has completed at least four weeks' work¹. When a worker is dismissed or voluntarily leaves the service of the Company after giving due notice, he receives a voucher for the part of the holiday bonus to which he is entitled under the rules of the establishment. Detailed regulations have been adopted to ensure that the amount shown on the voucher is used for the purpose intended.

Workers' Representations

Through the collective agreement, the management of the Company recognises delegates appointed by the workers as "the

¹ For the purpose of holidays, the year begins on 1 May and ends on 30 April

mouthpiece and the representatives of the organised workers". These delegates are elected from among "workers whose occupational competence is generally admitted" and who, whenever possible, must have worked for at least two years in the Company. The names of the delegates appointed must be notified to the Company not later than one week after their election.

The workers' delegates are required by the collective agreement to co-ordinate in every possible way with their union and their employer to maintain harmonious relations within the works. All claims and complaints must be sent by them to the head of the undertaking or, in his absence, to his representative.

Workers' delegates are not entitled to any special privileges as regards their work in the service of the Company. The Company agrees, however, not to sanction the dismissal of a workers' delegate except for reasons connected with the work itself.

The functions of workers' delegate are often combined with those of the chairman of the local section of the national trade union¹, or with those of the chairman of the workers' "shop club" whose delegate is required to protect the interests of the members of the club. At Rjukan, where the most important establishment of the Company is situated, a special organisation called the "Rjukan Labour Association" includes all the organised workers in the town. This body appoints three delegates who are empowered to discuss with the management all questions of interest to the general body of workers or certain sections of the workers.

There are no workers' councils in the establishments of the Company. The Act of 23 July 1920 makes provision for the appointment of such councils in undertakings employing more than fifty workers when a demand for them is made by more than one-fourth of the staff, but in practice no effect has been given to the Act.

HOUSING POLICY

As stated in the introduction, the Company's premises had to be built in uninhabited or sparsely populated districts, and the management was therefore faced right at the outset by a number of problems of which the housing of the workers was by far the most serious and most urgent. The methods adopted to solve this

¹ The Norwegian Chemical Workers' Trade Union, affiliated to the Norwegian Trade Union Federation

problem varied with the natural and demographical conditions in the industrial centres set up by the Company at Notodden, Rjukan and Heroen. At Notodden, where a small industrial population was already established when the first works of the Company were put up, and at Heroen, which is situated near the town of Porsgrund, the steps taken by the Company consisted mainly in encouraging the workers to build their own homes. At Rjukan, which lay in an almost uninhabited valley, the Company was itself obliged to build quarters for its workers. The housing policy adopted by the Company to meet the requirements in both cases is described below.

Low-Rental Dwellings

At *Rjukan* the Company has built a sufficient number of dwellings to house all its married workers and salaried employees including the management staff. The number of these houses is at present 1,300. The capital invested amounts to 22 million Kr., including the cost of building roads and other work of general utility.

The main idea of the policy followed by the Company at Rjukan has been to lodge one family, or as small a number as possible of families, in each house. The Company considers that a worker who spends eight hours a day in a factory ought to be given a chance of forgetting all about his work during his leisure time, a thing which is difficult to do if he is continually in contact with his fellow-workers. The organisation of work in the factory by alternating shifts makes it particularly desirable, moreover, to provide a separate house for each family, so that a workman's sleep need not be disturbed by a fellow-worker returning from or going to his work. For this reason, the workers' quarters at Rjukan include a large number of houses reserved for one family, while the majority of the other houses have been built to hold two, three or four families. In order to prevent the spread of possible outbreaks of fire more easily, the rows of houses, which are built of wood in accordance with the custom of the country, are separated by groups of brick houses. In order to achieve this aim, most of these houses are fairly large and therefore contain a considerable number of dwellings. When, as is usually the case, a house is inhabited by only one family or a small number of families, each family has its own garden attached to the house. The dwellings built by the Company vary in size from small one-room and kitchen flats to large villas intended for the managing staff. The Company

considers that a three-room and kitchen dwelling is the type of accommodation best suited to the present requirements of an average working-class family. It is therefore endeavouring to transform the greatest possible number of small flats into dwellings of this size. In 1932 alone, forty three-room and kitchen dwellings were built by transforming small flats. Most of the dwellings have a bathroom, generally situated in the basement.

The annual rent is calculated at the rate of 5.30 Kr. per square metre of floor space, which means that a three-room and kitchen dwelling costs from 28 to 37 Kr. a month. As the average earnings of a worker in the employment of the Company amount to 250-300 Kr., and even to 400 Kr. a month, such a rent would not seem to weigh heavily on the worker's budget.

The appearance of the workers' quarter at Rjukan is most agreeable. The taste of the inhabitants, which perhaps owes something to friendly rivalry, leads them to devote particular care to their gardens. In order to break the monotony of rows of similar houses, and with a view to giving each of them a personal touch, the Company has had them painted in varied and lively colours. So far as can be judged, the pride shown by the workers in the external appearance of their houses extends also to internal arrangements. Most of the families have a piano, and generally speaking their homes have the appearance of belonging to middle-class families rather than to wage earners.

Shortly after beginning building operations at Rjukan, the Company erected large premises intended to house about a hundred unmarried workers. This building contained a canteen, public rooms, vapour baths, etc. But as the persons living in these premises married one after another and went to live in their own homes, the initial object of the building disappeared. The Company therefore let the premises at a nominal rent to the community as a home for elderly persons.

It is to be noted that the Company supplies the inhabitants of the workers' quarter with electricity at the very low charge of 0.01 Kr. a kilowatt-hour, and thus enables them to heat their houses and do their cooking by electricity in very favourable conditions.

The management of the Company lets these dwellings in accordance with applications received, and in doing so makes due allowance for the number of children in the family of the applicant. Only applications from married workers are taken into consideration.

Notodden, it will be remembered, was inhabited by a small industrial community before the Company built its first works there, and this fact made it less urgent for the Company to build workers' quarters. The Company decided, however, to undertake building operations on a large scale in comparison with the size of the staff employed, and altogether 125 houses containing 229 dwellings were erected. The main idea of this scheme was to provide cheap dwellings, for rents were particularly high at Notodden. Following the policy adopted at Rjukan, the Company concentrated on building houses to hold one or two families at most. Only 35 of the 229 dwellings built by the Company are in houses containing more than two families. Finally, the Company built about twenty houses for single families at the port of Menstad near Porsgrund, these dwellings being intended for the higher-placed employees of the works.

Altogether, 25,000,000 Kr. were invested by the Company in houses built for the staff at Rjukan, Notodden and Heroen.

Acquisition of Houses by the Workers

At *Rjukan*, simultaneously with the construction of low-rental houses, the Company did its best to encourage workers to acquire their own home. With this end in view it built a number of houses for single families which it offered at cost price to members of the staff. Standing as guarantor, it arranged first mortgage loans for them, accepting second mortgages, repayable in twenty-five years, for the rest of the price. The Company adopted this policy rather than that of leaving the workers to build for themselves, because at that time it was engaged in large-scale building operations and could therefore put up houses under very favourable conditions. But the idea of owning a house did not make much progress at Rjukan. The principal reason for this seems to be that when a worker imposes sacrifices for himself in order to acquire a house, he generally desires to provide a home for his old age, and the outlandish position of Rjukan does not make this town a very desirable place for retired persons. The Company which, in acting thus, was actuated solely by a desire to help their staff, therefore decided to buy back the houses of those desiring to sell, but nevertheless a good number of the houses still remain the property of their purchasers.

At *Notodden*, on the other hand, the steps taken by the Company to help workers to become the owners of their own house were

crowned with success. Notodden is, in fact, a small town on the edge of a lake where the view is not obstructed as at Rjukan by a high mountain range and where communications with the rest of the country are good. The workers therefore contemplate with pleasure the idea of fixing themselves there definitely by using their savings to acquire a home.

In 1909 the Company bought land which it divided into forty-five plots, on each of which a house was built. These houses were sold at cost price to workers desiring to become homeowners. Each house consists of two dwellings, one of which is occupied by the owner, the other by a worker from the factory. The houses were sold on the same terms as those arranged at Rjukan.

During the early years of the world war the workers showed a desire to build their own houses and here again their wishes were met by the Company. Each worker desiring to build with the help of the Company was required to purchase the necessary land and carry out certain initial operations (navvying work and the laying of foundations). This was insisted on so that the worker concerned would feel that he was really doing something himself towards the acquisition of his house. Once these conditions were fulfilled, the Company granted a loan to cover the cost of building operations. The rate of interest on such loans was originally fixed at 4 per cent., but was subsequently increased in proportion to the discount rate, but in no case did it exceed 5 per cent.

A total of 150 workers' houses was built at Notodden with the financial help of the Company. The mortgages signed by the owners contain no clause foreclosing the loan in the case of a worker leaving the Company or disposing of his house. But in both cases the interest was increased by $\frac{1}{2}$ per cent. more than the discount rate of the National Bank.

At *Heroen* also, the Company made a great effort to encourage its staff to become house-owners. It purchased several sites in the neighbourhood of the works with a view to re-selling them at a reasonable price to workers desiring to build on their own account. Loans were granted up to 80 per cent. of the value of the buildings. These loans, which bear interest fixed at 5 per cent., were repayable in twenty years. When building operations are completed, the loans may be converted into loans from the State Building Mortgage Fund which makes a charge of $6\frac{1}{2}$ per cent. for interest and amortisation combined. The average cost of these buildings is 8,000 Kr. for a house for one family and 11,000 Kr. for houses for two families.

With the help of the Company, 120 workers' houses have been erected in the neighbourhood of the Heroen works, the capital invested in the form of loans amounting to 900,000 Kr.

Altogether, the loans granted by the Company for the construction of workers' dwellings amount to 1,300,000 Kr. The annual amounts payable on these sums are recovered mainly through the "Interessekontor", an office set up to administer the financial affairs of the staff. The organisation and working of this office are described below.

The "Interessekontor"

The "Interessekontor" has the double character of a savings bank and a staff income administration office. Set up solely in the interests of the Company's workers and salaried employees, it has its own special charter. Membership is open to all members of the staff. According to its rules its object is to help its members to meet their financial obligations (payment of taxes, interest and charges on loans, etc.), by distributing such payments over a long period by a system of deductions from wages or salaries. Among other things, it provides its members with opportunities for investment, while it also acts as a savings bank, and in exceptional cases aids members who get into financial difficulties.

Practically the whole of the staff of the Company belong to the "Interessekontor". It is owing to this organisation that such a large number of workers have been able to become owners of their own house. It also permits the workers and salaried employees to buy objects which, generally speaking, would otherwise be beyond their means, and to contract life insurance under very favourable conditions.

The Company bears the entire cost of the staff required to manage the "Interessekontor". All employees of the organisation are required to observe the greatest discretion even with regard to the management of the Company itself. The latter is also responsible for the management and investment of funds entrusted to the "Interessekontor". The amount of these funds varies, but on several occasions has reached as much as 2,000,000 Kr. The prudence with which this organisation is managed is shown by the fact that during its eighteen years of existence the total losses incurred barely amount to 2,000 Kr.

SOCIAL HYGIENE AND WELFARE

Industrial Safety and Hygiene

Norway possesses comparatively recent and up-to-date legislation for the protection of labour, the provisions relating to industrial safety and hygiene being consolidated by the Act of 18 September 1915. Under this legislation the competent departments of the Factory Inspectorate and the management of the Company co-operate in order to ensure that the plant offers the requisite safety and hygiene. It is true that certain processes used in the manufacture of nitrate fertilisers are not exactly agreeable or healthy, but a visit to the works gives the impression that the Company has done all that is humanly possible to safeguard the life and limb of its workers. For example, the hydrogen manufacturing departments are provided with balconies where the workers may rest and breathe pure air when their work allows. Highly sensitive apparatus automatically works a signalling system when for some unusual reason the hydrogen manufactured absorbs sufficient oxygen to make an explosion possible. The pipes containing the various gases given off during the manufacturing processes are painted in different colours (red for hydrogen, light blue for oxygen, green for nitrogen) and this enables the workers to remember the contents of any given pipe line. Whenever conditions permit, wash basins with running hot and cold water are placed at the disposal of the workers. At Rjukan, moreover, the Company pays for the upkeep of a trained fire brigade with highly perfected fire-extinguishing equipment, which is placed at the disposal of the community at a nominal charge. At Herøen, too, a fire brigade has been trained and equipped at the cost of the Company.

A noteworthy point is the great care which the Company has taken to make their works and the immediate neighbourhood a pleasant spectacle to the eye. At Rjukan the high-power stations have been fitted up both inside and outside with taste and even luxury which would do honour to any town hall. Flower beds and clumps of bushes planted here and there break the monotony of the typical appearance of an industrial concern.

Old-Age and Invalidity Insurance

In Norway a certain number of communes have instituted non-contributory old-age pensions, but there is no old-age insurance

scheme for the whole of the population or the wage earners, nor any general system of non-contributory old-age pensions. In such circumstances, the measures taken by the Norwegian Nitrogen Company on behalf of its retired employees and workers are of undoubtedly importance and meet a real need.

For *salaried employees* there has been set up a compulsory pension fund to which members contribute 2 per cent. of salaries not exceeding 14,400 Kr. a year. The Company meets all expenditure not covered by the ordinary revenue of the fund. After twenty-five years' service, members are entitled to a pension equal to 50 per cent. of their earnings below 14,400 Kr., provided they have reached the retiring age, which is fixed at sixty-six years for men and at sixty years for women. In addition, the fund also makes provision for pensions for widows and children of deceased members. The pension fund is combined with an invalidity fund.

During the financial year 1931-1932, the revenue of the pension fund amounted to about 937,000 Kr., of which members' contributions represented 453,000 Kr. and interest on accumulated capital 484,000 Kr. The assets of the fund totalled 9,700,000 Kr., while those of the invalidity fund amounted to about 640,000 Kr. These insurance funds are administered by a managing committee appointed by the Company, which has the assistance of a representative nominated by the members.

For *workers*, the Company has set up a special fund which is financed solely by the Company and of which the main object is to provide workers with old-age pensions. Unlike the salaried employees' pension fund, the members of which pay contributions, the benefits granted by the workers' old-age pension fund have no contractual character. Its operations are governed by rules approved by the management of the Company.

Only the Company's permanent workers are entitled to benefits, but the term "permanent" is applied in a rather wide sense. In order to be entitled to an old-age pension, a worker must as a rule have worked for the Company for the ten years previous to the retiring age, which is fixed at sixty years. The amount of the old-age pension generally amounts to 600 Kr. for workers who have completed ten years' service, plus 40 Kr. for each additional year's service, with a maximum of 800 Kr. In addition, cost-of-living bonuses are granted which may bring the maximum pension up to 920 Kr.

Besides old-age pensions, the fund may grant to the widows of permanent workers a pension of 30 Kr. a month plus 10 Kr.

a month for each child under sixteen years of age provided the total supplementary pension does not exceed 60 Kr. a month. Cost-of-living bonuses may be added to these pensions. Finally, the fund may grant up to a maximum of 60 Kr. a month to workers in cases of prolonged illness.

The capital of the fund was formed by a succession of grants from the Company, which also gave large subsidies in years when business was particularly remunerative. The assets of the fund at present amount to about 7,000,000 Kr. The supervision of the general management of the fund is carried out by a committee composed of four representatives of the management and three workers appointed by their fellow-workmen. This committee meets once a year to study questions connected with the working of the fund. The general operation of the fund is ensured by the administrative services of the Company.

Sickness Insurance, etc.

Norway has a compulsory sickness insurance system which applies to all workers whose annual remuneration does not exceed a certain amount, which is at present fixed at 4,500 Kr. The funds of this insurance system are derived from contributions paid by the insured persons and their employers and from grants from public funds. The insurance system provides insured persons with daily cash benefit, medical attendance, treatment in curative establishments, etc. This being so, the Company did not consider it necessary to set up a general sickness insurance scheme for its staff, but even in this field it has taken a number of measures.

For example, the Company has built on its own initiative and with its own money a hospital at Rjukan which can generally receive sixty patients. This hospital is open to the whole population of the district, but it is naturally intended in the first place for workers and salaried employees of the Company, who, in case of sickness, are treated there under the best conditions. The total cost of building and fitting up the establishment amounted to over 1,000,000 Kr. The hospital is run on the Company's money. For members of the sickness fund the cost of maintenance and treatment amounting to 6.50 Kr. a day is met by the sickness fund (that is to say, by the body of workers whose annual remuneration is less than 4,500 Kr.). Although the Company has waived its right to interest on the capital invested, each financial period ends with a deficit, which is also met by the Company. The hospital is managed

by a chief medical officer who has an assistant doctor, a probationary doctor and twelve nurses under his orders. The hospital is equipped with medical and surgical appliances which meet the latest technical and scientific requirements. It includes a general surgery and an isolation ward for contagious diseases. Each year between 700 and 800 patients receive treatment in the hospital.

In addition to the above measures the Company grants yearly subsidies varying from 7,000 to 12,000 Kr. to the Rjukan Health Association, a private organisation in which the officials of the Company play an important part. This Association has set up and runs a nursery and other institutions for children. With the help of the Company the Health Association has been able to establish a holiday camp in the mountains which each year takes seventy children from the town free of charge.

It may also be noted that the Company runs a sickness fund open to all members of the staff of the Rjukan works whose remuneration exceeds the limit laid down for compulsory sickness insurance. Charging only a modest contribution (8 Kr. a month for fathers of families and 5 Kr. for unmarried persons), this fund is able to supply its members and their families with all medical requirements, including treatment in hospital and, where necessary, in a convalescent home. It is managed by a committee composed of a representative of the management and the Company and two persons representing the members. Finally, it may be mentioned that all workers in the employment of the Company may receive relief from the workers' pension fund in case of prolonged illness.

WORKERS' SPARE TIME

It was at Rjukan that the Company made its greatest effort to help the workers to make the best of their spare time. In view of the love of sport common among Norwegian youth, and the particularly favourable position of the town, the Company devoted its energy in the first place to developing various forms of sport.

In the town itself, it built a large stadium, which it handed over to the Rjukan Sports Club, formed mainly of the Company's workers and salaried employees and their children. This stadium, which includes football and athletic grounds, required a considerable amount of navvying and other work. During the winter season, it may be converted into an ice rink. It is provided with stands for the public, dressing-rooms, shower-baths, etc. The plans were

made in conjunction with the committee of the Sports Club, to which the stadium was handed over, on condition that it was to be open to all members of the Federation of Norwegian Sports Associations, an organisation of a non-political character.

The Company also built at its own expense five tennis courts, which it has put at the disposal of the Rjukan Tennis Club, subject to the same condition as that imposed in connection with the stadium. As is known, skiing is a national sport of Norway, and the mountains surrounding Rjukan offer unique facilities for the practice of this sport. The Company has contributed in a large measure towards the construction of a sports hut in the mountains above Rjukan, about 12 km. from the town. This hut, which is the property of the Sports Club, includes several large common-rooms with fireplaces and accommodation for from twenty to thirty persons.

The Company owns vast tracts of land on the high plateaux where the streams which supply electric power have their sources. Scattered over this district are some two hundred shepherds' huts. The Company has had these converted into sports huts, which it rents at the modest price of 20 Kr. a year to its workers and employees who wish to have a shelter in the mountains when they go on shooting and fishing expeditions. It may also be noted that all members of the staff of the Company are entitled to fish and shoot on the Company's land. The Company also paid a large share of the cost of building a ski-jumping track near the large chalet of the Sports Club. Part of this track is in reinforced concrete. Two ski-jumping tracks have also been built by the Company in the town itself.

But of all the social measures taken by the Company, that which strikes the imagination the most is the large overhead cable railway which carries workers from the depths of the valley in which Rjukan lies into the heart of the surrounding mountains. While the climate of Rjukan is healthy, the town itself gets practically no sunlight during five months a year, and this is why the Company, in times when financial conditions were good, built a cable railway by which it is possible in a few minutes to reach an altitude where the sun exercises its beneficent influence on the body and mind. Starting from the town, which is 394 metres above sea level, this railway rises in four minutes to an altitude of 900 metres, where immense tracts of land offer superb facilities for sport, both in summer and winter. Its construction cost about 600,000 Kr. After deducting the cost of interest and amortisation,

which the Company refrains from claiming, the annual deficit on the working of the railway is 20,000 Kr. a year, and this, too, is met by the Company. The price of the tickets is so low (0.25 Kr. for adults and 0.10 Kr. for children) that even the most humble worker can use the railway to his heart's content.

The Company has also granted a loan of 135,000 Kr. without interest to a holiday camp built by the Rjukan workers on the edge of a lake at about 35 km. from the town. This camp includes a number of bungalows, each fitted up to house one or two families. The Company pays the cost of a band consisting of twenty amateur musicians, who undertake to organise a number of open-air concerts in the town every year. Three bandstands have been built for this purpose. It also grants an annual subsidy to the Rjukan Musical Association, which has its own choir and orchestra. Finally, the People's Club, which was built by the Rjukan Labour Association, was granted a loan of 100,000 Kr. without interest. These premises, which cost about 600,000 Kr., include meeting rooms, with a stage for theatrical performances, rooms for the local labour press, a restaurant and a cinema.

CONCLUSIONS

The study of industrial relations in the establishments of the Norwegian Nitrogen Company brings out a number of important points. In the first place, it shows how, with the help of appropriate social institutions, conceived often on most generous lines, a body of regular workers, trained to meet the technical requirements of modern industry, has been formed in a short space of time from a population practically devoid of any previous industrial training. In the second place, it provides an example of the co-existence in the same establishments of important social institutions due to the employers' initiative, organised trade unionism with advanced ideas, and a highly developed system of collective agreements.

The social policy followed by the Norwegian Nitrogen Company has necessarily been influenced to some extent by the special conditions obtaining in the country and in the district in which the Company's establishments are situated. As soon as his work is over, the worker in the employment of the Company can lead an existence which differs but little from that of his superiors of various grades. Like the overseer, the engineer or the director,

he possesses a garden in most cases. Nor does he need to worry overmuch about his old age. With the help of his employer, he is able to purchase numerous articles usually beyond the reach of a worker. In a few minutes, and at a minimum cost, he can reach wide table-lands where, according to the season, he can ski, hunt or fish in the same conditions as his chiefs.

There would seem to be no doubt that the comprehensive social policy so successfully followed by the Norwegian Nitrogen Company is, when taken in conjunction with the system of collective bargaining practised in its establishments, one of the main reasons for the harmonious relations which have been established between the management and the staff.

Industrial Relations in the Grand Duchy of Luxembourg

GENERAL INTRODUCTION

The Grand Duchy of Luxembourg has an area of 2,587 square kilometres and a population of 300,000. It lies in the north-west of Europe, and is bounded on the east by Germany—from which it is separated by the Moselle, the Sûre and the Our—on the south by France, and on other sides by Belgium, to which it is linked by an economic union. It consists of three separate belts, running east and west.

Towards the north, the Oesling plateau rises to a height of 1,500 feet, and resembles the neighbouring Belgian province of the Ardennes, with its rugged climate and barren soil. The population is sparse and grouped in villages such as Wiltz (well known for its tanneries), Vianden and Clervaux¹. The Herrenberg region lies next to and at the foot of the Oesling plateau. It consists of plainland interspersed with smiling valleys, and is, in short, a land of tillage and orchards. In this region is a number of agglomerations, including Diekirch, a town of 3,800 inhabitants and a centre of administrative, judicial and intellectual importance, and, some miles to the south-west, Ettelbrück, with 4,600 inhabitants, the agricultural and commercial centre of the region.

Gutland, or the “good land”, is the third belt. It is subdivided into the Luxembourg plateau district, the Moselle or wine-growing district, and, to the extreme south of the country, the iron ore district, the natural wealth of which has helped to make Luxembourg one of the most important steel-producing countries in the world. It would seem essential here to say a few words about the Luxembourg plateau district, although it is not this part of the

¹ For this part of the article, frequent use has been made of the information collected by the Fifteenth University Social Week (of Belgium), and printed in the *Revue de l'Institut de Sociologie*, Oct.-Dec. 1933, which is published by the Free University of Brussels.

Grand Duchy which is of the greatest concern to the present study. But this district, with the town of Luxemburg (55,000 inhabitants) in its centre and Echternach, an excursion centre, lying farther to the east, possesses large forests, which have contributed towards the wealth of the country to the same extent as the tanbark oak forests of the Oesling plateau. It was indeed directly due to the abundance of wood and the ready supply of charcoal that the first ironfoundries were established at Eich, Fischbach and Septfontaines to smelt alluvial mineral ores. The steel-manufacturing district, economically by far the most important in the Duchy, is also the most densely populated. Esch-a/Alzette has 30,000 inhabitants, while Differdange and Dudelange have respectively 18,000 and 15,000. In this district farming, to which the soil lends itself admirably, has had to give way before mines, blast furnaces, steel works and rolling mills.

The economic revolution which, towards the end of the nineteenth century, resulted from the exploitation of the iron ore mines of Luxemburg, was bound to lead to important demographic changes. About that time, a stream of alien workers, increasing in volume with each successive year, began to flow into the Grand Duchy which previously, owing to racial tendencies, had always been an emigration country. This movement reached its peak in 1907, when the steel and mining industries employed 6,124 Luxemburgers as against 10,254 aliens, including 6,129 Italians. Since the war, the proportion of Luxemburgers has never fallen below 60 per cent. and since the beginning of the world economic depression in 1929 it has shown a constant upward tendency. The fall in the number of alien workers amounted to as much as 55 per cent. for Italians and to nearly 70 per cent. for Slavs. These movements of the population did not, however, extend to the rural classes. The great stability displayed by this section of the population is mainly due to the widespread influence of small farming, in which 90,000 persons find employment on 16,000 farmsteads.

It is this wide development of small and medium-size holdings that explains the Luxemburgers' attachment to the land, just as it was formerly one of the main causes of the emigration movement. Strongly attached to the soil, the Luxemburg peasant is not greatly attracted by the factory, and, as seen above, he is prepared to leave the higher wages of the factory to alien workers. Even when he accepts work in a factory, he will not leave his village, preferring to cover long distances daily to get to his place of work. The twofold result of this is that he lives more cheaply than the

average factory worker, and is much more adaptable when overtaken by unemployment¹. It may here be noted that the supervisory staff in industry, like the higher grades in officialdom, are recruited mainly from the peasant classes, from which they inherit the vigour and continuity of ideas which characterise them.

Although throughout this report stress is laid on the importance of industrial production, it would be an error to suppose that that constitutes the only resource of Luxembourg. In 1928, for example, agricultural production amounted to 400,000,000 Luxembourg francs², as compared with 1,800 million francs representing the net value of the output of the steel industry. Since then, the relative importance of agriculture has shown a tendency to rise, as agricultural production has remained relatively stable, while industry has felt the effects of the worldwide industrial depression. The agricultural output of Luxembourg suffices to cover the main home requirements, and there is even a surplus for exportation, which in 1932 amounted to 70 million francs.

The industry of the Grand Duchy is dominated by the metal-working and mining branch, but certain other sections are worthy of note. Attention has already been called to the Oesling tanneries. To these may be added other wood-working industries: saw-milling, parquetry making, etc., while the building yards in the Duchy use Luxembourg sandstone. But it is not generally known that the Luxembourg nail trade exports to England and other countries, and that the Luxembourg hosiery, leather, footwear and glove industries supply the German markets.

Turning to the study of the iron and steel trade itself, one may note first of all that it is one of the oldest industries in Luxembourg. Even so far back as the beginning of the nineteenth century, it came up against international competition, and was saved only by the adherence of the Grand Duchy to the *Zollverein* in 1842. But other trials awaited the industry. In the first place, the market value of charcoal—a great source of wealth to central Luxembourg—was practically destroyed by the advent of coke, while the use by the English steel trade of the Bessemer process, impracticable as it was in the Lorraine-Luxembourg basin, had disastrous effects for

¹ At the end of April 1934, which is as far as this study goes, the number of workers in receipt of assistance from unemployment and emergency funds was 453, including 38 aliens. Unemployment is therefore practically non-existent in Luxembourg, if regard be had to the economic capacity of the country.

² The Luxembourg franc has the same value as the Belgian franc: one-seventh of the gold franc.

the steel trade. Impending ruin was, however, averted in 1879 by Thomas and Gilchrist, the English inventors of the process of slag grinding by the basic converter. From this moment, continual headway was made by the industry, which reached its peak in 1929 with an output of 2,900,000 tons of pig iron and 2,700,000 tons of steel.

Luxemburg, as is well known, has concluded an economic union with Belgium. Before the conclusion of this agreement, the Grand Duchy had, for the greater part of a century, been a member of the *Zollverein*. Although Luxemburg exercised no direct influence on customs legislation, this period was very favourable to her, and especially for her metal industry. Possessing mineral ores, and obtaining coal supplies from the Ruhr and the Saar basins, Luxemburg formed a part of the Rhenish-Westphalian industrial movement. When it denounced the *Zollverein* on 1 January 1919, Luxemburg declared itself in favour of an economic union with France, where her steel industry would have obtained conditions very similar to those it had previously enjoyed. In the end, however, an economic union with Belgium, with the consequent changes, was concluded. By the agreement of 25 July 1921 the two countries agreed to recognise each other's currency as legal tender.

In concluding this general introduction, a few words on the social legislation of Luxemburg will not be out of place. It will be necessary from time to time to refer back to this legislation in studying the effects of its application to the various aspects of industrial relations. It may be said that at the present time the social legislation of Luxemburg may be held up as an example. In many cases, the Grand Duchy has acted as a pioneer; in others, its legislation has been modelled on the most liberal laws of neighbouring countries. Ever since 6 December 1876, the minimum age for admission to industrial employment has been fixed at twelve years, while in 1890-1891 it was limited to sixteen or eighteen years for certain classes of mining and quarrying work. The prohibition of night work for persons under sixteen years of age also dates back to the year of 1876. Moreover, Luxemburg was one of the first countries to ratify (on 3 August 1907), the international Convention adopted at Berne in 1906 to prohibit the night work of women. Thereafter, a series of intermediary measures led up to the ratification, on 5 March 1928, of the twenty-five Draft Conventions adopted up to that time by the International Labour Conference, an act which brought Luxemburg at one bound to the top of the list of countries

in respect of the number of International Labour Conventions ratified by them¹.

THE ARBED-TERRES ROUGES AMALGAMATION

The importance of this amalgamation in the economic system of Luxemburg is so great that it merits a special study. There are very few examples, if any, of an amalgamation of private interests absorbing such a large part of the industrial life of the country in which it is situated. It is for this very reason that the Arbed-Terres Rouges have been selected to provide examples of industrial relations for the present report. Before proceeding any further, however, it would seem fitting to give a general description of the establishments themselves.

Of the forty-six blast furnaces in Luxemburg, twenty-five belong to the Arbed-Terres Rouges establishments². The proportion remains the same when the number of blast furnaces in operation in April 1934 is taken as a basis of comparison, the Arbed-Terres Rouges owning thirteen of the twenty-one furnaces then in operation. If their Saar and Rhenish works be included, the Arbed group produces almost as much pig iron and steel as the whole of the metal works in the Grand Duchy³. Further and even more complete figures may be obtained by a study of Luxemburg employment statistics. According to the last census, taken on 31 December 1930, the total population of Luxemburg was 299,782, including an occupied population of 120,850. On 1 January 1934 the total number of workers employed in industry in the Grand Duchy was 27,557, including 17,485 in the metal-working and mining industry⁴. At the same date the staff employed in Luxemburg by the Arbed-Terres Rouges Amalgamation numbered 11,407, or nearly one-half of the total number of persons employed in the industries of the Grand Duchy, and about two-thirds of the total number of workers employed in the metal-working and mining industry.

¹ At the beginning of 1934, Luxemburg, with twenty-seven ratifications, was overshadowed only by Spain and Uruguay, both of which countries had thirty ratifications to their credit.

² The word "Arbed" is formed by the initials of the "Acieries réunies de Burbach-Eich-Dudelange".

³ In 1933 the output of pig iron and steel—almost entirely intended for export—for the whole of the Grand Duchy was respectively 1,887,540 tons and 1,844,840 tons. During the same year the Arbed establishments produced 1,604,160 tons of pig iron and 1,646,940 tons of steel.

⁴ These figures are quoted from *L'Echo de l'Industrie*, a weekly periodical published by the Federation of Luxemburg Manufacturers.

The vast combine known by the name of Arbed-Terres Rouges is essentially the creation of two families, one Belgian and the other belonging to Luxemburg—a fact which might well be taken as a symbol of the present economic union between the two countries.

In 1847, a private company was formed by members of the Metz family under the style of "Auguste Metz et C^{ie}" at Eich, a small locality some miles to the north of the town of Luxemburg. The company built four blast furnaces for transforming alluvial mineral ores, which used charcoal produced in the forests of the Grand Duchy. After the construction of the first railway line in Luxemburg, coke soon made the use of charcoal a thing of the past. The Metz Company immediately decided to transform its plant and equipment, and in 1865 proceeded to do so in the neighbouring district of Dommeldange, after having increased its capital by converting the original concern into a limited company known as the "Forges d'Eich". This company built four coke blast furnaces at Dommeldange, although it may be noted in passing that the first coke blast furnace was erected at Eich in 1857 by the Metz Company. As far back as 1854, the directors of the company had begun to buy up mining land in the south of Luxemburg and in Lorraine, with the result that by 1903 the mining property of the Eich Ironworks covered an area of 1,750 hectares.

Meanwhile, Mr. Victor Tesch, a former Minister of Justice in Belgium, and sometime Governor of the "Société Générale de Belgique", had founded, in 1856, a Belgian company in the Saar called the "Société en participation des Forges de Sarrebrück". This step was a reply to the protectionist measures with which Prussia had surrounded its growing metal industry, and which had closed the German markets for Belgian iron and steel products. After building the Burbach works and acquiring large mining interests, this company was converted, in 1862, into a limited company named the "Société des mines du Luxembourg et forges de Sarrebrück".

In 1871, the Burbach Company concluded an agreement with the Eich Company for the building and joint working of four blast furnaces at Esch-a/Alzette, in the iron ore district of Southern Luxemburg. In 1879, the Eich Company took out the first patent rights to use the Thomas steel process, which enabled it to transform the phosphorous pig iron of Luxemburg into steel in very advantageous conditions, and allowed the Grand Duchy to compete in the steel market against other countries using the Bessemer process, which could not be adapted to Luxemburg pig iron.

In order to be able to use the Thomas process, Mr. Victor Tesch,

acting in conjunction with the Eich Ironworks, founded the company "Société anonyme des hauts fourneaux et forges de Dudelange", at about a dozen kilometres to the east of Esch-a/Alzette. This company laid down six blast furnaces, a Thomas steel works, rolling mills, etc., and by 1911 had already acquired about a thousand hectares of mining deposits. In addition to these joint holdings, there was that held by the "Société des mines du Luxembourg et forges de Sarrebrück" in its own name, and which covered an area of 4,000 hectares situated partly in Luxembourg and France and in German Lorraine. In closing this description of the undertakings prior to their amalgamation, it may be noted that the Eich Company, while acquiring considerable interests in the southern part of Luxembourg, did not abandon the scene of its original activities, and in 1908 built at Domneldange the first electric steel works in Luxembourg.

In 1911, these various undertakings, already connected by inter-marriage between the Metz and Tesch families, decided to amalgamate. This fusion merely gave a sort of official recognition to an existing state of affairs, the successive stages of which have just been outlined. At the time of its foundation, the new company, with its five works capable of an annual output of approximately 1,200,000 tons of pig iron and 900,000 tons of steel, its own mining possessions of an area of about 6,750 hectares, and its coal-mining concession of 2,626 hectares, ranked among the largest metallurgical undertakings in Europe. Its trade name—"Aciéries réunies de Burbach-Eich-Dudelange"—did not really show the real size of the concern, which, in addition to those mentioned, included the works of Domneldange and Esch-a/Alzette.

After their amalgamation, the growth of the undertakings was very rapid. In 1912, the Arbed group acquired the Hostenbach works in the Saar. At the same time the vertical organisation of the group was continued. In 1913 an amalgamation with the "Eschweiler Bergwerksverein", near Aix-la-Chapelle, led to the Arbed group taking over the management of that concern, thus ensuring a source of supply for its blast-furnace coke requirements. During the same year, new blast furnaces, a steel works and rolling mills were laid down at Esch-a/Alzette. A further phase in the vertical organisation was completed in 1917, when the Arbed establishments bought out the share capital of the company "Stein und Thonindustriegesellschaft Brohlthal" at Burgbrohl, near Coblenz, a transaction which provided it with the necessary supplies of fire-clay products.

Immediately after the war, the Arbed establishments continued the plan of horizontal development begun in 1911, and took part, together with Messrs. Schneider and Company (Creusot works), in the constitution of the "Société métallurgique des Terres Rouges". This company was formed in 1919, with a capital of 100,000,000 francs, for the purchase of the metal working undertakings owned by the Gelsenkirchen Company in the Grand Duchy and Rhineland. The Arbed group also helped to constitute the "Société minière des Terres Rouges", to which the property of the Gelsenkirchen Company was ceded when Lorraine again became a French province. In 1920 the Arbed and Terres Rouges combines acquired large interests in the company of "Felten & Guilleaume Carlswerk" of Cologne-Mulheim, which manufactures electric and steel cables, while it also proceeded to enlarge its coal-mining concessions by taking up a large part of the capital of the "Société anonyme des charbonnages Helchteren et Zolder" in the Belgian Limburg. In the same year, the Arbed and Terres Rouges groups set up the "Comptoir métallurgique Luxembourgeois", known by the name of "Columeta", to which they entrusted the sales monopoly for all their products. In 1921, the two groups acquired considerable interests in the "Sociedad Anonima Talleres Metalurgicos San Martin" in Buenos Aires, the output of which represents at least 60 per cent. of the total metal-working industry of the Argentine Republic. During the same year, the Arbed concern, acting in conjunction with Belgian, French and Luxemburg groups, formed the "Companhia Siderurgica Belgo-Mineira", the largest metallurgical company in Brazil.

The vertical organisation was continued in 1922 by the acquisition of shares (the Company's holding now amounts to 95 per cent. of the capital stock) in the company "Clouteries et Tréfilerie des Flandres" at Guitbrugge (Belgium), which takes up the greater part of the wire-rods manufactured at Esch-a/Alzette. A further step towards the complete amalgamation of the various interests was completed in 1926, when the Arbed and the Terres Rouges groups were combined. By an exchange of shares (four Terres Rouges for one Arbed share), the Arbed group became the owner of about 99 per cent. of Terres Rouges capital stock. In the same year the Dudelange plant was enlarged by the addition of a sheet-iron works and a cold rolling mill. Finally, in 1926, the Arbed group took over as much as 93 per cent. of the capital stock of the "Eschweiler Bergwerksverein".

In this rapid sketch of the growth of the Arbed group, no reference

has been made to a number of companies in Belgium, France and Luxemburg in which somewhat less important holdings were acquired. These companies include the "Société métallurgique d'Aubrives et Villerupt", at some kilometres from Esch-a/Alzette, but on French soil; the Errouville Company and the Bellevue Mines, also in France; the "Société de Transports et d'Affrètements" at Antwerp; the "Société anonyme des Anciens établissements Paul Wurth" and the "Société des ciments luxembourgeois" in Luxemburg.

A description of the undertakings situated outside the Grand Duchy would go beyond the limits of the present study. Even keeping to these limits, the list is quite long enough, and it is therefore preferable to keep to essential details. Two groups are geographically distinct, namely the Eich-Dommeldange group, situated to the north of the town of Luxemburg, and the Esch and Dudelange group, lying to the south of the town, and to which the works of the "Société minière des Terres Rouges" at Audun-le-Tiche, on French soil, are attached.

The old works at Eich include a foundry producing pig-iron castings for general engineering purposes, an engineering workshop, a pottery factory, and a radiator works, while, at Dommeldange, there are three blast furnaces with a potential daily output of 300 tons of pig-iron, a Siemens-Martin steel plant and an electrical melting plant with potential monthly outputs of 4,000 and 1,100 tons respectively, a rolling mill containing two trains of rolls, a steel foundry, an iron foundry, a bronze foundry, a heat treatment shop, etc.

The undertakings of Esch-a/Alzette form by themselves a group of considerable importance. Including the works of Audun-le-Tiche, situated on neighbouring French territory and belonging to the "Société minière des Terres Rouges", this group includes eighteen blast furnaces, steel works and rolling mills capable of producing 160,000 tons of pig-iron and 140,000 tons of steel a month in most economical conditions. Moreover, the four works at Esch and Audun-le-Tiche have been linked up as the result of very considerable efforts by a private railway and a system of blast furnace gas mains and electric cables.

One of the three works at Esch belongs entirely to the Arbed group, the two others—Esch-Terres Rouges and Belval—to the "Société métallurgique des Terres Rouges". The first comprises three blast furnaces of a total potential daily output of 1,000 tons of pig-iron, a Thomas steel works with five 30-ton converters, a

rolling mill with one blooming train and five finishing mills, etc. The Esch-Terres Rouges works, which are specially equipped for the production of pig-iron, possess five blast furnaces with a total potential output of 1,750 tons a day. The iron produced by these works is conveyed in a molten state to both the Belval steel works and the Arbed-Esch steel works to which reference has just been made¹.

Belval is one of the most modern and well-equipped steel works in Europe. Built originally with a view to large extensions, it covers an area of 200 hectares and includes six blast furnaces with a total potential daily output of 1,800 tons of pig-iron, a Thomas steel works with six 30-ton converters, an 8-mill rolling plant, etc. The Dudelange works, which are linked up to the Esch group only by electric cables, are equipped with three blast furnaces with a total daily output capacity of 1,500 tons, a Thomas steel works with four 25-ton converters, a 6-mill rolling plant, a cold rolling mill, two sheet-iron works (average and thin), a foundry, etc.

This description would hardly be complete without a few remarks on the iron mines worked by the Arbed-Terres Rouges amalgamation. In this case also only mines actually in the Grand Duchy will be considered, although it is to be noted that the total superficial area of the iron mines owned by the Arbed-Terres Rouges group and supplying their Luxemburg works and the foundry at Audun-le-Tiche in France, is 10,453 hectares. In the territory of the Grand Duchy, the Arbed works own over 840 hectares and hold another 387 hectares of mining concessions, while the Terres Rouges group has 179 hectares of mining concessions. As the works are situated close to the mines, the cost of conveying ore is reduced to a minimum. In many cases, the concessions lie across the Franco-Luxemburg frontier, while they are often separated one from another by the concessions of another important metal-working company of Luxemburg: the "Société des Hauts Fourneaux et Acieries de Differdange-Saint-Ingbert-Rumelange", known by the initials H.A.D.I.R., a company founded with French and Belgian capital. It is interesting to note how the force of circumstances leads to collaboration between neighbouring concerns, and even between interests on opposite sides of a political frontier. For example, the ten blast furnaces at Differdange, which belong to the H.A.D.I.R., are linked up to the Ottange mines on French soil by a funicular railway which crosses the political frontier at three

¹ The same operation is carried out between the Audun-le-Tiche works on French soil and the Belval and Esch steel works.

different places and the concessions of the Arbed-Terres Rouges at a number of points.

The ore, of variable colour but mainly of a brownish red hue, which gives the name of Terres Rouges to the company so frequently mentioned in this study, is composed of a series of small oölitic grains embedded in calcareous or silicious strata, the upper layers being calcareous, the lower silicious. In these two strata numerous fossils are found, a fact which explains the high percentage of phosphorus in the ore.

The electric power for working the iron mines and works is obtained from the calorific energy of the blast furnace gas transformed by a central power house. It is used for haulage, for ventilation where the natural ventilation of the mines is insufficient, and for pumping in deep mines. The ore is won by means of shattering explosives of powder, nitrate of soda or liquid oxygen, the latter being manufactured in the mine itself. Boring is carried out by pneumatic hammer-drills.

The ore-bearing strata being regular and almost horizontal can be worked by the pillar-and-stall system. First of all, roads are cut at a very gentle slope. On one or both sides of these roads, diagonal roads are then driven from which, at intervals depending on the firmness of the roof, the stalls are opened out for a certain distance. When this distance is attained, the workers retreat from the stall, taking down the pillars of ore left standing between the different stalls. This operation is called "depillaring" and results in an immediate fall of the roof.

A few words must now be said concerning the central management of the Arbed-Terres Rouges Amalgamation. The general and managerial services are housed in central offices situated in the town of Luxemburg, a special wing being reserved for the "Comptoir métallurgique luxembourgeois" ("Columeta"). Besides the usual offices, the headquarters of the amalgamation contain meeting rooms for the staff, to which further reference is made in another part of the study.

The Chairman of the Administrative Board of the Arbed group is Mr. Gaston Barbanson, grandson of the late Mr. Victor Tesch, founder of the Burbach Works, while Mr. Eugène Schneider, the well-known French manufacturer, is Chairman of the Terres Rouges group. The General Director for both Arbed and Terres Rouges establishments is Mr. Aloyse Meyer¹, who, like his principal assis-

Mr. Aloyse Meyer is also Chairman of the International Steel Trust.

tants, is a native of Luxemburg. Three Assistant General Directors are responsible respectively for the management of the Arbed-Terres Rouges Amalgamation, the management of the "Columeta" and the management and supervision of the interests acquired by the two companies to which detailed references have already been made. Some of the central services have a Manager at their head, this being so in the case of "Columeta"¹. Finally, the undertakings on Luxemburg soil are divided into six divisions, each with its own manager and corresponding to the main production units mentioned above: Dommeldange-Eich, Dudelange, Esch-Arbed, Esch-Terres Rouges, Belval, Arbed mining concessions. Social questions—those of more direct interest to this study—are dealt with by one of the directors at headquarters and, in each division, by the manager of the division.

LEGISLATION GOVERNING INDUSTRIAL RELATIONS

In the part of the above introduction dealing with the economic and social position of Luxemburg, it was stated that the social legislation of that country has always been most advanced and progressive. This is confirmed in the field of industrial relations, as will become evident in the following pages. Permanent relations have been established at every stage of industrial organisation. The legislation relating to "workers' committees", which will be discussed in detail later, is in no way exhaustive. It is supplemented on the one hand by the existence of trade chambers and, on the other, by the works regulations of the undertakings themselves.

The Engagement of Alien Labour

Before proceeding to study a typical example of works regulations, it is perhaps desirable to say a few words on the engagement of labour. So far as national labour is concerned, there is nothing special to be noted, but this is far from being the case as regards alien labour, which still forms about 20 per cent. of the personnel of industrial establishments in Luxemburg and 25 per cent. of that employed in metal-working and mining concerns. For such labour a special permit must be obtained from the General Direc-

¹ The marketing organisation "Columeta" has branches and agencies in sixty-seven towns abroad, situated in thirty-eight countries in five continents.

torate of Labour and Social Welfare¹, otherwise the alien is not authorised to enter the Grand Duchy.

Applications for engagement permits must be made by the employer in writing to the General Directorate of Labour and Social Welfare, and must be accompanied by a certificate from the official employment exchange, declaring that the current registers of persons seeking employment do not contain the name of any worker of Luxemburg nationality who could fill the vacancy, and also that the employer has submitted the following identity papers for the inspection of the employment exchange: the passport² of the person applying for work; certificates from former employers showing that the applicant has the necessary qualifications for the employment which he is soliciting; an extract from the police register respecting the person concerned, not more than a year old; and a certificate of character issued by the communal authority or the commissioner of police for the district or districts in which the applicant has resided during the preceding twelve months³.

Further, in order to avoid deportation on medical grounds and the expenditure resulting for the Luxemburg Government from deportation, the Order stipulates that the application for a permit must be accompanied by a medical certificate issued as the result of a compulsory medical examination carried out under the supervision of a Luxemburg consul abroad, or in default of such consul, a Belgian consul. This certificate must state that the medical practitioner issuing the certificate has previously vaccinated the worker concerned and noted the result; that the worker is not subject to epilepsy or any contagious disease and in particular pulmonary tuberculosis or venereal disease at a contagious stage; that he is not addicted to drugs; and that, in general, he is not suffering from any other physical or mental infirmity rendering him unfit for the occupation which he proposes to follow, or liable to necessitate long hospital treatment. The medical certificate, which must be drawn up in a specified form, must not have been

¹ Grand Ducal Order of 30 November 1929. In accordance with the provisions of the Labour Treaty concluded between Belgium and Luxemburg on 20 October 1926, such authorisation is not required for persons of Belgian nationality.

² Only an identity card is required for nationals of Belgium, France and the Netherlands. For a certain number of other countries a Luxemburg consular visa is not required.

³ Admission to the Grand Duchy is refused to aliens in possession of the necessary papers if the extract from the police register or the certificate of character shows that the person or persons concerned are deemed to be dangerous or possible disturbers of public peace and order. In cases of doubt, the question is decided by the Chief Officer of Public Safety.

issued more than a fortnight before the date of entry of the worker to the Grand Duchy. Further, in order to avoid any future dispute, the worker must sign a statement on the actual health certificate that he is free from the diseases and infirmities mentioned in the certificate. By his signature he is deemed to admit at the same time that he has been warned that any inaccuracy in his statement renders him liable either to be refused admission into the territory of the Grand Duchy or to be expelled from it by the competent police authorities even after a prolonged sojourn, with no further legal formality than the mere notification of the case by means of a report addressed to the Attorney-General's Department.

It is to be noted that the engagement permit is of an essentially revocable character. It must be accompanied by a certificate to the effect that the alien worker concerned has been admitted to employment in the Grand Duchy. The employer transmits this certificate, together with the other identity papers (passport, extract from police register, certificate of character, and health certificate) to the alien applying for work, who must submit them to the supervisory officials (customs officers and general police officers) in order to pass the frontier. The employer subsequently notifies the authorities of the alien worker's arrival, and takes charge of the alien's identity papers, which are then placed in the worker's personal file and serve as documentary evidence when the engagement register, the keeping of which is compulsory, is officially checked. Finally, in order to ensure the strictest possible compliance with these prescriptions, it is forbidden for keepers of hotels, inns or lodging houses, and persons who let houses or flats, to give lodgings for more than twenty-four hours to any alien worker who fails to show that his declaration of arrival has been made within that time. All such persons must, moreover, keep a special register, which must show, in addition to the usual information, the date on which alien lodgers have given them proof that their declaration of arrival has been made.

In addition to the elaborate system of precautions adopted by the Luxemburg authorities for the admission of alien workers to the Grand Duchy, a further safeguard exists in the medical examination in the factory itself of all alien workers not medically examined before entering the territory of the Grand Duchy. Works regulations usually require the immediate termination of the contract of employment, if the worker, on his engagement, has produced false papers, has given false information or has concealed the existence of another contract under which he is

bound. Sometimes, however, deceptions practised on the medical authorities are difficult to detect. This is so when a worker already in possession of an entry permit, and who is suffering from a contagious disease, arranges for a friend to take his place at the medical examination¹. The works engagement office can frustrate such attempts at fraud only by arranging for the medical examination to be made in a neighbouring room, or by having the applicant accompanied on his way to the doctor, or by requiring the doctor to check the applicant's identity from identity papers bearing the applicant's photograph.

Works Regulations

As a typical example of works regulations in Luxembourg, one may select the "Works Regulations of the Luxembourg Divisions" of the Arbed² establishments and their special service regulations for salaried employees, while noting that similar regulations are in force in the Terres Rouges works. The opportunity will also be taken to make a rapid survey of the Luxembourg legislation relating to conditions of labour.

Although the regulations of the Arbed group are not a mere reproduction of the statutory provisions in force in Luxembourg, they nevertheless embody the essential features of that legislation. They, therefore, may be said to constitute the contract of employment between the Company and its staff in all cases where conditions of employment are not laid down by special agreement, but they give way to any special departmental regulations with which the worker or salaried employee has undertaken to comply.

The main provisions of the works regulations may now be studied. Clause 4 states that the worker, by the very fact of his engagement³, undertakes to obey the instructions of his superiors, to perform with zeal and care the work entrusted to him, to study the interests of the Company to the best of his ability, and to refrain from any activity which might adversely affect the work and good order of the establishment or cause prejudice to the Company in any

¹ This may even have been done at the time of the examination in the applicant's country of residence.

² It will be remembered that the Arbed-Terres Rouges undertakings on Luxembourg territory are divided into six divisions: Dommeldange (Arbed), Dudelange (Arbed), Esch-Arbed, Arbed mining, Esch-Terres Rouges, and Belval (Terres Rouges).

³ Children under fourteen years of age and girls under sixteen years are not employed. These provisions go beyond the International Labour Convention on the subject, which was ratified by Luxembourg in 1928.

way. Each worker is signed on for a definite job. If he proves to be incapable of such work, he may be immediately dismissed or employed on other work, possibly at a lower rate of pay. He may even be employed on other work when no fault can be imputed to him, but in this case without any reduction of the agreed wages. This stipulation is waived when there is a partial or entire stoppage of work in the establishment. But in the event of unemployment in one of its divisions, the Company undertakes to distribute the available work uniformly throughout the whole division, in so far as this is possible. When any exceptional stoppage of work is to be foreseen, the workers are informed with the least possible delay.

Hours of work are regulated by the eight-hour day legislation¹ in force and according to the exigencies of the service. The time for beginning and knocking off work is posted up in each branch. If provision is made for a rest period, the beginning and end of such period are arranged to suit the convenience of the branch, and then brought to the notice of those concerned. When, in a branch engaged on continuous processes, the weekly change-over is being carried out, the workers are obliged to work for twice as long as the length of the normal spell. In order to facilitate supervision, workers are required to make use of the roads indicated to them for journeys to and from the works. When they are unable to go to work on account of sickness or other sufficient reason, they must notify their respective foremen before work commences or, when this cannot be done, as soon as possible, and at any rate within twenty-four hours. A worker who has been ill must return to work immediately after his recovery and report his return to his foreman.

As in all large industrial concerns, very strict rules are applied during working hours and a certain number of restrictions are applied. For example, it is against the rules to bring in, or to cause to be brought in, or to consume, alcoholic beverages in any department of the Company; to bring strangers into the premises without permission; and to bring in or cause to be brought in

¹ Order of 14 December 1918 and the ratification in 1928 of the international Convention concerning hours of work in industry. In this connection it may be noted that night work by women and children is forbidden by an Act which is based on the provisions of the respective international Conventions. A similar measure has been adopted to regulate the employment of women, before and after childbirth. With regard to weekly rest, the Act of 21 August 1913 was sufficiently comprehensive to allow Luxembourg to ratify the corresponding international Convention without introducing any fresh legislation.

and to distribute newspapers or printed matter of any kind among the staff of the Company.

With regard to safety, the works regulations stipulate in general terms that all work given to the workers must be carried out with care and in accordance with the instructions of superiors and the safety requirements. If an accident occurs to a worker, he is required, whenever possible, to notify his superior and to give the necessary explanations before leaving the establishment. If he injures one of his fellow-workmen in a scuffle, he must be prepared to pay¹ the benefits which the sickness fund would otherwise have paid for loss of working capacity caused by injury. Workers are recommended, in their own interests, to keep the workshops, premises and services in a state of perfect cleanliness.

The chapter dealing with attendance, work and discipline concludes with a list of the workers' various superiors. These are, starting from the bottom, the ganger, the overseer, the foreman or overman, the chief foreman or chief overseer, and then the assistant engineer, the departmental manager, the chief of service, and, finally, the manager. During working hours, the workers are required to show respect to their superiors and obey them implicitly. They are also required to obey the orders of doormen, watchmen and supervisors.

The Company is entitled to terminate the contract of employment without notice or delay if the worker, at the time of his engagement, has produced false papers, given false information, or concealed the existence of another contract by which he was then bound. Clause 50 of the regulations makes provision for other cases of immediate dismissal. For example, the worker may be immediately dismissed if he is guilty of an offence punishable under the Penal Code or if he lives a disorderly life; if he is late for work or leaves it too early without good reason or permission, or if he refuses to carry out the duties imposed on him by the works' regulations; if he is absent without leave for more than three consecutive days; if he endangers the safety of the service, his fellow-workmen, or other persons; if he is guilty of assault or threats against his superiors, his fellow-workmen, or members of their families; if he intentionally causes prejudice to the Company or his fellow-workmen, or incites his fellow-workmen to do so; if he commits, either individually or collectively, a serious breach of the laws in force, or

¹ Cf Article 78 of the Law of 17 December 1925 concerning the social insurance code.

incites his companions to do so; if he is unable to continue his work or is affected by a "foul" disease; if he betrays trade secrets; and, in general, if he fails to fulfil his obligations with regard to the good order and discipline of the establishment and the fulfilment of the contract. The Company reserves the right to claim compensation when necessary. On the other hand, it forfeits its right of instant dismissal if it is has been aware for more than a week of the fact justifying dismissal.

Without prejudice to the application of Clause 50, contraventions of the provisions of the works regulations may entail deductions from wages. These fines may not exceed, in any one month, one-tenth of the total wage for that month, and are deducted from the wages due for the last period of pay. Deductions from wages may be replaced by temporary dismissal not exceeding three working days. The names of persons fined, with particulars as to the motive and the amount of the fine, are posted up in the works by the chief of the service, whenever the latter deems this to be advisable. The termination of a contract of employment does not remove the obligation to pay fines. All fines, with the exception of those imposed as a result of damage caused to the Company, are paid into the sickness fund of the division.

No details of the provisions relating to the payment of wages need here be given, as these have no special characteristics. But it would seem advisable to mention that holidays are fixed by the Act of 6 December 1926, as completed by Ministerial Instructions issued on 21 May 1927, 31 March 1933, and 17 February 1934. After one year of uninterrupted service with the Company, the worker is entitled to an annual holiday with pay of four days¹. After five years, annual paid leave amounts to five days; after ten years to seven days; and after twenty years' service to twelve days a year. It is to be noted in this connection that, prior to the introduction of the Act, the Arbed establishments had already instituted holidays for workers employed in their establishments, on a slightly lower scale. Holidays are granted only to workers who have worked at least 280 days during the previous year, this number being reduced to 270 in the case of miners. In this period are included days of absence due to sickness or accident, absence previously authorised by the employer, and periods of non-authorised absence due to unavoidable circumstances or causes independent of the will of the wage earner, which have prevented him

¹ Seven days for wage earners and apprentices under eighteen years of age

from obtaining prior authorisation. The worker who himself terminates his contract, and who has not been re-engaged during the three months following the determination of the contract, and workers who are dismissed for serious reasons entitling the employer to dismiss them without notice, lose their right to holidays.

It is not without interest to note the details of the procedure for the termination of contracts of employment. Save in the case of a special agreement, and with the exception of the cases laid down in Clause 50, the two parties can terminate a contract only by giving a fortnight's notice. Notice of termination may be given to the workers only by the chief of service or by a delegate authorised to do so, and known to the workers as such. The immediate dismissal of a worker may be notified only by the management or by the chief of service. Notice of dismissal may be given only on certain days laid down in advance for the different divisions. If one of these days falls on a Sunday or a holiday, the notice expires only on the following working day. If a worker leaves the Company of his own free will and without notice, a deduction equal to one-tenth of the wages due to him is made at the moment of paying his wages, by way of compensation. The worker who leaves the Company receives a certificate giving details of the nature and length of his services. When a contract of employment is terminated with or without notice, the worker loses, even if he is re-engaged later, all his rights to the privileges which the Company confers for a certain period of uninterrupted service.

The short chapter dealing with complaints is of particular interest from the standpoint of industrial relations. Clause 45 states that complaints by the workers must be submitted in the first place to the respective foremen. If the worker does not receive satisfaction, he may apply to his superiors in order of rank. The manager of the division decides in the final instance. Finally, Clause 46 deals with the institution of workers' committees, of which full details are given elsewhere. For the moment, it is sufficient to point out that the main workers' committee must be consulted before any amendment can be made in the works regulations.

Salaried employees are engaged by a written individual contract of which the "service regulations", the same for all employees, form an integral part. The "service regulations" do not differ to any great extent from the "works regulations". Their main features are outlined below.

Clause 1 gives a list of the employees' superiors: chief of service

or branch, management of the respective divisions, general director. On entering the Company, the employee signs a contract which regulates reciprocal rights and obligations in so far as these are not laid down in the service regulations. The contract must not contain any provision contrary to the said regulations or to the laws of the country. If a difference arises between an employee and a subordinate, the latter may appeal to the general management, after notifying his immediate chiefs. The committee of salaried employees may be called upon to intervene with a view to the settlement of the dispute.

The same declaration of loyalty to the undertakings is found: "Employees are required conscientiously to respect the interests of the society by complying with the regulations, the stipulations of their contract and the instructions of their chief." Employees are required to devote the whole of their occupational activity to the service of the Company. They must provide their chiefs with any explanations required concerning the service. It is forbidden for them to communicate to persons outside the Company specifications, diagrams, models, statistics, or other documents of any nature belonging to the Company¹. They are required to observe the greatest discretion as regards the internal working of the services.

Salaried employees are forbidden to engage or take an active part in any other business. It is forbidden for them to order the workshops of the Company to make anything for them without the previous consent of the manager of the division concerned. They may not employ the Company's workmen for their own requirements, but outside working hours this restriction applies only in the case of workers belonging to their own service. Salaried employees may not place orders for the Company without the necessary authorisation. No employee may apply, either directly or indirectly, for patent rights for Luxemburg or any foreign country in the range of industry covered by the Company; should such patent rights be granted, they remain the property of the Company. It is understood, however, that an employee who makes an invention of appreciable value to the Company will be suitably compensated, such compensation being limited to 50 per cent. at the most of the profit resulting from the patent. Inventions which

¹ The Act of 5 July 1929 concerning unfair competition makes provision for fines and terms of imprisonment for the divulging of business or manufacturing secrets by salaried employees, workers or apprentices.

are of no direct or indirect interest to the Company, and which are not the outcome of work performed in the works with the assistance of the staff of the Company, are excluded from the foregoing prohibition.

Salaried employees are required to keep strictly to the hours of service¹. The date of their annual holiday is fixed by the manager of the division, on the application of the chief of service². Holidays must be arranged so as to avoid any inconvenience to the service and, if possible, no two employees of the same service should be on holiday at the same time. Whenever practicable, the fellow-workers of the employee on holiday must perform his duties during his absence.

According to their gravity, breaches of the Regulations committed by employees may entail a reprimand, suppression of their annual increment or bonus, temporary suspension or immediate dismissal. The final decision in all such matters lies with the general manager. The only power given to the Administrative Board in this connection is to decide as to the amount of compensation, if any, to be paid to the dismissed employee.

The service regulations for salaried employees may be amended at any time by the Administrative Board of the Company, after consultation with the salaried employees' committee.

Workers' Committees

The legislation which instituted workers' committees constitutes the basis of the relations between employers and wage earners in Luxembourg.

Workers' committees were formally instituted by the Grand Ducal Order of 8 May 1925, but steps in this direction had already been taken some years earlier. The first step was made by the Order

¹ The eight-hour day legislation applies also to salaried employees, as does the legislation governing the weekly rest, the minimum age for admission to employment and the employment of women before and after childbirth. The main provisions relating to salaried employees are embodied in the Act of 31 October 1919, concerning the hire of services of private employees.

² The Act of 31 October 1919 lays down the length of the annual holiday period for employees as follows: at least ten days' holiday with pay after three years' and not more than five years' uninterrupted service with the same employer; at least twenty days' holiday after five years' uninterrupted service. The Arbed, Terres Rouges and Columeta Companies have adopted more generous provisions. Their employees are entitled to an eight-day annual holiday with pay after one year of uninterrupted service, ten days' holiday after three years' service, twenty days after five years, and twenty-eight days after twenty-five or more years' service.

issued on 26 April 1919, and subsequently amended on 26 July 1920. The intention was to set up works councils similar to those in force in Germany at that time. The Order of 26 July 1920 was never made operative, and was replaced on 8 October 1920 by new provisions, to which very little effect was given¹, but which served as a model for the Order of 8 May 1925, a detailed analysis of which is given below.

The Arbed group, to which reference must once again be made, issued on 1 September 1921, although not obliged to do so, works instructions intended to comply with the spirit of the Order of 8 October 1920, but differing from it in certain material respects. In the first place, shop delegates were recognised, but not a works council composed of such delegates. The age of the electors was fixed at twenty-one years instead of eighteen years as in the Order, and that of workers eligible for election as delegates at twenty-five years instead of twenty-one. Electors were required to have had one year's uninterrupted employment in the works of the Company instead of one month as required by the Order, while five years' uninterrupted employment, with at least one year in the department concerned, was the criterion of eligibility for election, as compared with the six months stipulated in the Order of 8 October.

The duties of delegates did not differ to any great extent. The text of the Order was couched in very general terms. The works council was required to foster a good understanding between employers and workers, and to make suggestions to that end in so far as such suggestions were in conformity with the law. It was, however, definitely laid down that the works council was to concern itself with all questions relating to the material and moral welfare of workers, with special reference to requests and proposals relating to the contract of employment, works safety and welfare institutions, to problems connected with wages and other conditions of work. On this point the Arbed instructions stated that the duty of the workers' delegates was to bring to the notice of the management or its representatives any demands which might be made in connection with questions of hygiene, safety, work or wages by the workers who elected them. The fundamental difference lay in the methods employed by the delegates, which in turn was due to the fact that the management of the Arbed works did not recognise a

¹ The application was suspended by the Order of 11 March 1921, as a result of certain labour movements of a revolutionary tendency in February of that year.

council of delegates, but only delegates acting independently. While, in accordance with the Government text, delegates were to meet during working hours in premises specially allotted to them within the works, and were entitled to wages for working time lost, and even to a travelling allowance when necessary, the Arbed delegates were not allowed (Clause 8) to hold their meetings within the works. Unless with special permission, delegates were not even entitled to carry out their duties during working hours. But all that is a thing of the past.

The Grand Ducal Order of 8 May 1925 relating to 'the institution of workers' committees in industrial establishments' did actually come into force, and is still applied. Section 1 defines the work of the committees, which is to further co-operation between employers and workers by means of the settlement, in accordance with the law, of matters which concern both parties. It is specially stated that the work of the committees and their negotiations with the employers' representatives must be concerned with questions of the moral and material wellbeing of the workers, and in particular that they shall deal with wishes and suggestions as to the contract of employment, social insurance and welfare arrangements in the establishment, wages questions and other conditions of employment. This is more or less the same definition as was given to the duties of the works councils in the Order of 8 October 1920.

The Order is compulsory only for undertakings employing at least twenty workers¹. If an industrial undertaking consists of several separate establishments, each establishment must elect its own main committee. In this case a central committee may be set up for the whole undertaking, composed of representatives of these main committees. Further, if an establishment consists of various branches, the workers in each branch may appoint a branch committee, provided that at least fifty workers are employed in the branch as a rule. This is the system in force, for example, in the Arbed-Terres Rouges establishments.

The size of the main committees is fixed as follows. For a staff of 20-50 workers, 1 member; 51-80 workers, 2 members; 81-100 workers, 3 members; 101-150 workers, 4 members; 151-200 workers, 5 members.

If the number of persons employed exceeds 200, the committee is increased by one member for each additional hundred workers, provided that the total number of members does not in any case

¹ Apprentices and young persons are not included in this figure.

exceed fifteen. Provision is made for the election of an equal number of substitute members. Branch committees consist of one actual and one substitute member for every fifty workers, provided that the total number of members does not exceed five. The central committee, which is the senior body to the main committees concerned in undertakings consisting of several establishments under a single general director, is composed of two or three delegates from each main committee and an equal number of substitute members appointed by each committee.

The conditions laid down for electors and candidates for election resemble to some extent those of the Order of October 1920 and to some extent those of the works instructions issued by the Arbed Company in 1921. All workers, without distinction of sex or nationality, who have attained the age of eighteen, are in possession of their civil rights, and have worked continuously in the establishment for at least six months, are entitled to vote. Aliens must, in addition, have been employed continuously in the establishment for the twelve months immediately preceding the election. Any men and women workers may be elected as members of the committees if they have attained the age of twenty-five, are in possession of their civil rights, have worked continuously in the establishment for at least a year, and have been employed for at least three consecutive years in the same industry. Leading hands acting as foremen are not eligible to the committee. Aliens must, in addition, have been resident in the Grand Duchy for at least five years, or must have worked in an establishment there for the last five years. Further, the number of alien members may not exceed one-third of the total number of members. In case of the establishment of a new business or the reopening of a business after a temporary cessation, the period of employment laid down for electors and candidates for election is not required.

The term of office of the delegates is fixed at four years for all committees. New committees must be chosen every four years, retiring members being eligible for re-election¹. Further, the term of office of a member or substitute member of a committee expires on his death, on his leaving the establishment, on his voluntary resignation, on his promotion to a managerial post, and in case of his loss of eligibility. The substitute member takes the place of the original member forthwith in the cases enumerated above,

¹ This rule was introduced by the Order of 2 June 1933. The Order of 8 May 1925 had fixed the term of offices of delegates at two years, and in consequence committees were renewed every two years

and temporarily in the event of absence for good and sufficient reason. The committee elects from among its own number, by a simple majority on a ballot, a chairman and a secretary. In case of an equality of votes, the older candidate is deemed to be elected.

The members of the committees and their substitutes exercise their functions in an honorary capacity. Nevertheless, attendance at meetings called during working hours may not entail any loss of wages. The employer must provide the committee with a suitable place of meeting, as well as with the necessary office accommodation.

The main committees may meet once a month during working hours, provided that the management is given twenty-four hours' notice. In case of need, the chairmen of the main committees may convene the branch committees for a meeting during working hours, provided that the management is given twenty-four hours' notice, and that the number of such meetings in a year does not exceed six. In all other cases the meetings must be held outside working hours. The convening of the committees is usually carried out by the chairmen. A meeting of the committee must be called on a requisition by one-third of the members of the committee. The employers' representative (the manager of a division, for example) is also entitled to convene the committees. If attendance at such meetings necessitates expenditure on travelling, such expenditure is refunded to the members of the committee by the employer.

The meetings of the committees are not open to the public. Nevertheless, the employers' representatives may be invited to be present at the meeting of a committee, but are not entitled to vote. They are always entitled to attend meetings convened by themselves. The Government may send to the meeting an official who is entitled to address the meeting. The proposals and wishes of the committees are communicated to the management in writing¹. When negotiations have been conducted with the management, a statement of the results achieved (the text of which must be approved by the committee) must be posted up by the management in the establishments concerned for the information of the workers.

Another provision which recalls the Order of 8 October 1920 is that which states that in establishments employing more than a hundred workers, the main committee, with the consent of the employer, may arrange consulting hours at the committee room

¹ Always to the manager concerned. This, in Arbed establishments, is the chief of service in the case of branch committees, the manager of the division for main committees, and the general director for the central committee.

on a given day of the week, during which the workers, outside their working hours, may lay their wishes and complaints before a member delegated by the committee for this purpose.

The later sections of the Order of 8 May 1925 deal with the main duties devolving on the workers' committees. The first matter dealt with is the question of disputes between workers and their foremen. It is pointed out that such disputes may not be brought before the committee until after they have passed through the stages provided for in the works regulations¹. If a worker is dismissed without notice, the reasons for his dismissal must be reported to the competent committee. If alterations are introduced into the establishment, necessitating the dismissal of a considerable number of workers employed, the committee must be given due notice beforehand.

There are a number of special guarantees to avoid the arbitrary dismissal of a member of a workers' committee. Committee members may not be dismissed on account of any action arising out of the exercise of their functions as committee members, unless such action constitutes a serious breach of the rules of employment or the laws in force. If an objection is raised to the dismissal of a committee member, the Government, on the application of the main committee, supported by sufficient reasons, may order the appointment of a committee to enquire into the case. This committee of enquiry is composed of a representative of the employer, a representative of the workers, and a magistrate as chairman.

The committee has another important duty, to which reference has already been made, arising out of its compulsory consultation on the drafting or the amendment of the works or shop regulations. The main committee must similarly be heard on questions concerned with wage settlements of a permanent and general character, the drawing up of collective labour agreements², the fixing of annual leave, and apprenticeship. Any alterations in the conditions as to wages, in so far as they concern individual groups of workers, must be brought to the knowledge of the main committee.

¹ Cf. remarks made above in the analysis of the works regulations of the Arbed establishments.

² In Luxembourg there is no legislation governing collective labour agreements. A Bill relating to collective agreements with compulsory arbitration was introduced in the Chamber of Deputies on 24 April 1917, but has remained in suspense. Nevertheless, the principle of the collective labour agreement was included in section 8 of the Act of 6 December 1926, concerning holidays for workers.

It is also laid down that the committees are required to co-operate in the reduction of risks of accident and sickness and to assist the industrial inspectors and any other competent authorities concerned by putting forward proposals. They are also required to lay before the employer the wishes of their constituents as to the voluntary welfare institutions of the undertaking.

It is to be noted that, without prejudice to the application of section 23, which fixes the fines for actual or attempted contraventions of the Order, all disputes must be settled according to circumstances by the Factory Inspector or the Mining Engineer. An appeal against these decisions may be made to the competent General Director, whose decision is final¹.

A few remarks must now be made on the procedure for the election of workers' committees². Section 8 of the Order of 8 May 1925 stated that the election was to be by ballot, and that an absolute majority of votes was required. These provisions were amended by the Grand Ducal Order of 17 May 1929, and replaced by the following text "Workers' committees shall be elected by ballot. The method of election shall be that of voting on lists of candidates in accordance with the system of proportional representation" The regulations for electoral procedure given in an appendix to the Grand Ducal Order of 8 May 1925 were, as a result of the amendment made in the methods of balloting, made the subject of a new Ministerial Order dated 17 May 1929. The main features of the new Order are summarised below.

The elections are organised and managed by the head of the undertaking in person, or by a representative appointed by him for the purpose. The head of the undertaking³ must cause to be drawn up a register of the workers eligible to vote and a register of the workers eligible for election. These registers must be available for inspection by the persons concerned at least a fortnight before the election. A notice must be issued on the day on which the registers of electors are open for inspection, to inform the workers that any objection to the registers must be lodged within three days. This notice must at the same time specify the date of the poll, the number of members and substitutes to be

¹ The General Director of Social Welfare and Labour, etc.

² The last elections took place in January 1934. The Grand Ducal Order of 2 June 1933, increasing from two to four years the term of office of delegates, ordered new elections to be carried out and that the new committees should be in office by 1 February 1934.

³ In each case the phrase "or his representative" is to be understood. It will not be repeated in the following pages.

elected, and the days and hours for receiving nominations of candidates. The head of the undertaking must pronounce, after hearing the parties concerned, on any objections to the electoral registers which may have been lodged. He must communicate his decision to the objectors within a week of the opening of the registers for inspection.

The nomination of candidates for office as members or substitutes is made by means of lists, which must reach the head of the undertaking at latest by 6 p.m. on the fourth day before the polling day. After this time-limit, no further nominations of candidates will be received. Any isolated nomination is deemed to constitute a list in itself. Each list of candidates must be presented by five electors; it must further be accompanied by a declaration signed by the candidates and stating that they are willing to stand for election. The list must give in alphabetical order the names in full and the occupations of the candidates, and the names of the electors nominating them. No individual may have his name on more than one list either as a candidate or as nominator, and a list may not contain a number of candidates greater than that of the members and substitutes to be elected. Each list must bear a descriptive title; if different lists bear the same title, the delegates are invited to make the necessary distinguishing marks, and in default of this the lists are marked by the head of the undertaking with a serial letter; this must be done before the expiry of the time-limit assigned for the nomination of candidates.

The head of the undertaking must register the lists in the order in which they have been presented. It is his duty to refuse to register any list which fails to comply with the above-mentioned requirements. If identical declarations are made respecting candidates whose names are on the lists, the first in date shall be valid. If they bear the same date, none is valid. If the number of candidates does not exceed that of the members and substitutes to be elected, or if the number of candidates nominated is less than that of the members and substitutes to be elected, these candidates are declared elected without further formalities, provided that only one list of candidates has been presented and that this list expressly names on the one hand the members and on the other the substitutes, in the order in which they are to replace the members. The head of the undertaking keeps a record of the proceedings.

If no valid list of candidates has been sent in within the prescribed time-limit, the head of the undertaking makes this

known to the electors, and grants them a supplementary time-limit of three days. If, on the expiry of this supplementary time-limit, no valid list of candidates has been presented, the head of the undertaking draws up a report to this effect and sends it, with the relevant documents, to the General Director of the Government department concerned. The members and the substitutes are then appointed, *ex officio*, from among the eligible workers of both sexes.

The valid lists of candidates are posted up during the three days immediately preceding the poll. The posters must show, on a single sheet and in large letters, the names in full and occupations of the candidates on all the valid lists which have been registered. The order in which the candidates have been nominated in each list is maintained, and the lists are placed in an order fixed by lots cast by the head of the undertaking, in the presence of two electors as witnesses.

Parts III and IV of the Ministerial Order deal with voting papers, the election committee, and the counting of the votes. The arrangements made are similar to those generally in use, and call for no comment. It may be useful, on the other hand, to give some information concerning the allocation of seats.

Once the number of voters, the number of spoilt voting papers and the number of valid papers have been ascertained by the election committee¹, a return is made showing the number of list votes obtained by each list of candidates, and the number of individual votes obtained by each candidate. In order to decide the allocation of seats, the total number of valid votes secured by the various lists is divided by the number of members to be elected, increased by one. The number next above the quotient so obtained is called the electoral quota. To each list there is assigned a number of members' seats, and as many substitutes' seats, equal to the number of times the quota is obtained in the number of votes secured by the list. If the number of members and substitutes so elected is less than the number of members and substitutes to be elected, the number of votes received by each list is divided by the number of members' seats which it has already secured, increased by one. The member's seat and the corresponding substitute's seat are assigned to the list which obtains the highest quotient. The same process is repeated if there are still any seats

¹ The head of the undertaking acts as returning officer, and is assisted in his duties by two workers' delegates appointed by the electors present.

to be distributed. In case of equality of quotients, the available member's seat and substitute's seat are assigned to the list which has secured the greatest number of votes.

Members' seats and those of substitutes, as the case may be, are assigned in each list to those candidates who have obtained the greatest number of votes. Substitutes' seats are assigned to those candidates who come next to the titular members in the number of votes. In case of equality of votes the oldest candidate is declared elected. If a list secures more seats than the number of candidates on it, the number of seats remaining vacant is distributed among the other lists. For this purpose a fresh proportionate distribution is carried out.

A report is drawn up immediately on the election proceedings and the results of the election. This report is signed by the returning officer and the two assessors. The names of the members and substitutes elected are posted up in the establishment for three days. If an elected candidate refuses to take office, the candidate who has the next lower number of votes is deemed to be elected in his place. Refusal must take place within six days after the publication of the result of the election. The validity of the election may be contested within the eight days immediately following the poll. Objections must be lodged either with the Factory Inspectorate or with the Mines Department, as the case may be. If the competent authority decides that the election is void, a new election must be held within a month of the date of this decision. The election records must be kept by the committee until the expiration of its term of office. All the election expenses are borne by the head of the undertaking.

It will be remembered that among other things the workers' committees are required "to co-operate in the reduction of risks of accident and sickness and to assist the factory inspectors and any other authorities concerned, by putting forward suitable proposals". This provision, which is embodied in the Order of 8 May 1925, implied the adoption of further provisions concerning the institution of workers' safety inspectors, and provisions to this effect were subsequently introduced by the Grand Ducal Order of 31 December 1929.

Every main committee¹ must appoint one of its members to hold the post of workers' safety inspector. Every fortnight the

¹ Or branch committee, if the undertaking includes services employing more than fifty workers as a rule

safety inspector, together with the head of the establishment or his representative, is required to make a tour of inspection of the establishment or branches for which the committee has been appointed. During the tour of inspection the safety inspector must concern himself exclusively with questions relative to the safety of the workers. At the end of the tour of inspection the safety inspector must enter the results of his observations in a special register, which must always be kept at the office of the establishment, where the committee, the head of the establishment or his representative, and the officials of the Factory Inspectorate or Mines Department may have access to it.

In urgent cases, when the observations may demand immediate action on the part of the Factory Inspectorate or Mines Department, the safety inspector may apply directly to these authorities, provided that at the same time he gives notice of this to the head of the undertaking or his representative and the committee. The officials of the Factory Inspectorate and Mines Department are entitled to require the safety inspector to accompany them on their official inspection rounds; they may likewise require him to attend accident enquiries. The safety inspector may not suffer any loss of wages on account of his absence from work due to tours of inspection or help given to officials of the Factory Inspectorate or Mines Department.

All disputes which may arise out of the administration of the provisions of the Order of 31 December 1929 are settled by the Factory Inspectorate or Mines Department, according to the case. The parties concerned are entitled to appeal against the decisions of the Factory Inspectorate or Mines Department to the General Director of Labour and Social Welfare, whose decision is final. This appeal must be lodged within a week of the notification of the decision of the Factory Inspectorate or Mines Department.

The corresponding legislative measures applicable to salaried employees may now be considered¹. These measures are embodied in sections 24 and 25 of the Act of 31 October 1919 " respecting the legal regulation of the contract of service of private employees ", to which reference has already been made.

The head of an undertaking in which at least fifteen salaried employees are regularly engaged must appoint a salaried employees'

¹ The legislative provisions concerning staff representation also include the Grand Ducal Order of 26 May 1930 concerning the staff employed by Luxembourg railway companies.

committee comprising three members and two substitute members, to be chosen by ballot and by a majority of votes. If the number of employees exceeds fifty, the committee must be increased by one member and one substitute member for each further 100 employees. Every separate works belonging to the same undertaking is required to have such a committee. The regular members and substitutes must be renewed every three years, retiring members being eligible for re-election. The members of the committee appoint a chairman from among their own number; their duties are purely honorary. The employer is responsible for furnishing a room for meetings, and for the expenses of office work, heating and lighting.

The committee of salaried employees must meet at least once every three months. In addition, the chairman may convene it at other times either on his official initiative or at the request of the employer or of two members. The agenda and the rules of procedure for meetings are drawn up by the committee.

The duties of the committee are to give an opinion on amendments to be made in the service regulations of the undertaking, to settle disputes between the employer and employees by way of conciliation, to transmit the wishes of the employer and of the employees, to protect the interests of the employees, and to take a part in the management of welfare schemes established by the employer for the improvement of the situation of employees or their families.

It may be opportune here to make a few general remarks on the principles implied by the regulations discussed above. In the first place, too much stress cannot be laid on the fact that there is a close connection between the works regulations of each undertaking and the activity of the respective workers' committee¹. The works regulations are among the papers which the worker receives when he is engaged, and by the mere fact of his demanding to enter the establishment he undertakes to comply with all the provisions of the regulations, which, in fact, become his working rules. In this respect the works regulations of undertakings in Luxemburg are in no way exceptional. But the institution of workers' committees modifies this unilateral system, inasmuch as the respective committees are required to discuss the terms of the regulations when

¹ The same remarks apply to salaried employees' committees. This observation need not be repeated.

they are being drawn up and, as has been emphasised on several occasions, must be consulted whenever the management proposes to introduce amendments to the regulations. It is true that the management is not legally obliged to take account of the opinion given by the committee, but in practice no provision is ever included in the works regulations when it is opposed by the respective workers' or salaried employees' committee.

It has also been seen that the workers' committees must be notified of the reasons for a worker's dismissal without notice, and must be informed beforehand in the event of mass dismissals. Here again, it is not merely a question of pure formality. The duties entailed by these prerogatives, and those resulting from their right to settle disputes arising between the worker and his superior once the usual procedure provided for in the works regulations has failed, are considered by the workers' committees to be among the most important tasks which they are called upon to perform. The drafting of work regulations and the application of their most important provisions are thus an integral part of the duties of the workers' committees.

There is also, as has been seen, another field in which the workers' committees are called upon to play an important part, namely, the establishment of wage rates of a permanent and general character. Here also the consultation of the workers' committee or the salaried employees' committee as the case may be is compulsory. Finally, as already stated, the Act of 6 December 1926 has made provision for the possible conclusion of collective labour agreements, and a Bill regulating the form of these agreements is still before the Luxembourg Parliament.

Trade Chambers

In spite of the obvious interest of these institutions, it will be impossible here to give them all the attention they deserve, and only those aspects of them which have some connection with industrial relations will be discussed.

The main facts concerning the trade association movement in Luxembourg are as follows. Industrial employers are grouped in the Federation of Luxembourg Manufacturers, which was founded in 1918 and now includes all manufacturers in the Grand Duchy. The middle classes are represented by the Federation of Commercial Associations and the Federation of Craftsmen's Associations. Agriculturists belong to either the Federation of Agricultural

Associations or the Federation of Wine-Growers' Associations. Workers who desire to take part in the trade union movement may do so through the "Commission Syndicale" or free trade unions, of Socialist tendency, which at present have an aggregate membership of 12,000 persons after reaching their peak in 1920 with a membership of 27,000, a figure which represented practically the total number of persons employed at that time in the industry and commerce of the Grand Duchy. Workers are also free to join the Federation of Christian Trade Unions¹. Salaried employees are organised in the Federation of Unions of Salaried Employees, which has a membership of 2,500.

There is no obstacle to trade association in Luxemburg. Freedom of association is guaranteed for all classes by the Constitution of 17 October 1868, which states that "The people of Luxemburg have the right of association. This right is not subject to any preliminary authorisation." The right of assembly is guaranteed in the same terms, but is subject to the provisions of the Communal Law of 24 February 1843. This law recognises the right of the people of Luxemburg to assemble without the necessity of prior authorisation, provided that they do so peacefully, without arms and in accordance with the existing laws. This provision does not apply to assemblies in the open air, political, religious or other, as such assemblies remain entirely subject to the laws and police regulations. Moreover, section 310 of the Penal Code punishes with fines and imprisonment or either of these two penalties "any person who, with the object of forcing an increase or decrease of wages or of interfering with the free working of industry or labour, shall commit acts of violence, utter any threats or abuse, pronounce fines, prohibitions, or any proscriptions whatever, whether against the workers or against the employers". The same section of the Penal Code declares picketing and acts of destruction to be punishable offences. Acts of destruction against steam engines, however, come under section 523 of the Code².

The Act of 4 April 1924 set up five elective trade chambers

¹ The Federation of Christian Trade Unions of Luxemburg had a membership of 2,238 on 1 January 1932, according to the report of the General Secretary to the Fifth Congress (Antwerp, 22-24 June 1932) of the International Confederation of Christian Trade Unions

which correspond to the large occupational categories already mentioned¹.

The Chamber of Agriculture corresponds to the Federation of Agricultural Associations and to the Federation of Wine-Growers' Associations; the Chamber of Commerce to the Federation of Luxemburg Manufacturers and to the Federation of Commercial Associations; the Chamber of Handicrafts to the Federation of Craftsmen's Associations; the Chamber of Salaried Employees to the Federation of Unions of Salaried Employees, while the Chamber of Labour corresponds to the free trade unions and to the Federation of Christian Trade Unions.

In the composition of each of these chambers, the legislator has made due allowance for the demographic and economic importance of the various elements which they represent². Thus in the Chamber of Agriculture, five of the nineteen members represent the wine-growing industry. In the Chamber of Commerce, which comprises twenty-one members, three seats are provided for the wholesale trade, four for the retail trade, four for metal and mining establishments regularly employing over 200 wage earners, six for small and medium-size industry, one for banking, one for insurance companies, and two for the hotel industry. The Chamber of Salaried Employees, which includes twenty members, allocates six seats to employees in large and medium-scale industry, eight to railway employees, two to employees in small-scale industry, one to employees in banks and insurance companies, and three to employees in commerce, agriculture or forestry and to other branches of trade not specially mentioned. The Chamber of Labour, composed of eighteen members, allocates twelve seats to workers in large and medium-scale industry, and six seats to small-scale industry and commerce. In the Chamber of Handicrafts, which comprises twelve members, the seats are distributed among the various trades.

The duties of the various chambers are more or less identical, and cover the interests of the trades they represent. The chambers are corporate bodies, and are required to create and, if necessary, to subsidise establishments, institutions, organisations or services

¹ The Act of 4 April 1924 was amended by the Act of 3 June 1926, but the amendments relate only to the contributions which the chambers are allowed to charge in order to meet their expenses.

² The Ministerial Order of 12 November 1932 has slightly altered the rules governing the allocation of seats in several of the chambers. The new distribution is given here.

the main purpose of which is to improve the lot of those concerned (agriculturists, commercial workers, wage earners, etc.), and to promote their activities, to give opinions, make complaints, demand enquiries and produce statistical information. They are entitled to propose legislative measures, and their proposals must be examined by the Government and laid before the Chamber of Deputies if they relate to matters within the competence of the latter. Moreover, the opinion of the trade chambers must be procured on all Acts and Ministerial Orders and Grand Ducal Decrees relating mainly to their occupational interests.

A few of the prerogatives of the Chamber of Labour are given below by way of example. The Chamber is required to protect and defend the interests of the workers. It is required, in particular, to supervise the observance of labour legislation (Acts relating to social insurance, night work, employment of women and children, hours of work, regulations respecting sanitary conditions in workshops, dwellings, etc.). It supervises and checks the execution of individual and collective contracts of employment. Its opinion must be asked on all Bills affecting the working classes before the final vote of the Chamber of Deputies is taken. It transmits to the Chamber of Deputies its observations on the use made of the votes granted in the previous year to promote the interests of the working classes, and gives its opinion on the grants to be applied for in respect of the following year. It makes proposals concerning the supervision of the industrial training of the workers.

The members of the trade chambers are elected by ballot by an electoral body corresponding to each group represented (agriculturists, commercial workers, craftsmen, etc.). The majority system is adopted for the Chambers of Agriculture, Commerce and Handicrafts, and the system of lists of candidates on the basis of proportional representation for the Chamber of Salaried Employees and the Chamber of Labour, so as to safeguard the rights of trade union minorities.¹ The result is that the respective occupational associations exercise a predominant influence in the composition and the working of the chambers.

A provision of the greatest interest from the standpoint of

¹ The entry of a person's name on the electoral register is deemed to be evidence of his qualification as a voter. The electoral register is drawn up in alphabetical order by the Mayor and aldermen separately for each chamber and for each group; it is not liable to alteration, except for deletions and entries which may be made on the occasion of the revision carried out every four years.

industrial relations is that embodied in section 44, the text of which is given below *in extenso*:

"Whenever two or more trade chambers have to deal with matters of common interest, they may hold a joint meeting to discuss such matters with a view to joint decision. In such cases each chamber shall delegate two or more of its members to attend the said meeting. The total number of such representatives shall not exceed the number of members of whichever of the chambers concerned has the largest membership.

"Whenever circumstances so require, the Government may convene representatives of two or more chambers for the joint discussion of questions which affect various occupations. The expenses shall be defrayed by the individual chambers."

This provision of the Act concerning trade chambers is not, however, very often applied. Indeed, for some years back it has tended to overlap with the prerogatives of the Economic Council, about which a few remarks must be made before closing this chapter.

The Economic Council of Luxemburg, set up by the Grand Ducal Order of 3 December 1931, acts in an advisory capacity. It is required, at the request of the Government or on its own initiative, to make a general study of questions of interest to the economic system of the Grand Duchy. In addition, in its capacity of supreme advisory organ, it must collaborate with a view to co-ordination with the existing organisations, and in particular with the trade chambers. The Economic Council has a maximum membership of fifteen regular members and a number of advisory members. These members are appointed for two years by Ministerial Order. The Government may also entrust the study of special questions to experts, who take part in an advisory capacity in the deliberations of the Economic Council. The Government elects the chairman from among the regular members of the Economic Council. It also appoints a secretary, an assistant secretary, and where necessary one or two officials responsible for carrying on the business of the Council. The Council is convened by its chairman or by the Government. It may take a decision only if at least half of its regular members are present. The duties of the members of the Economic Council are honorary. Nevertheless, a refund is made for expenses incurred by members who are required to undertake a journey in order to be present at meetings or carry out a mission for the Council.

Members appointed in an advisory capacity include the Chairmen of the Federation of Luxemburg Manufacturers, the Chamber of Labour, the Chamber of Commerce, the Chamber of Agriculture,

the Chamber of Salaried Employees and the Chamber of Handicrafts. The State Commissioner attached to the International Bank of Luxemburg, a member of the Supreme Council of the Belgo-Luxemburg Economic Union, the Vice-Chairman of the Chamber of Agriculture, the Director of the Federation of Agricultural Associations and a member of the Chamber of Commerce may also sit on the Council in an advisory capacity.

As the majority of the members of the Council are representatives of the trade chambers, they are mainly called upon to protect the interests of the various trades and to contribute in this way towards the amalgamation of their common interests for the good of the community at large¹. This dovetailing of the work of the two important advisory institutions explains to some extent why the provision of the Act of 4 April 1924 concerning joint discussions by several trade chambers has fallen into desuetude.

EMPLOYERS' SOCIAL INSTITUTIONS

Under this term are to be included not only the "voluntary welfare institutions" mentioned in section 18 of the Act concerning workers' committees, but also all other institutions set up by private undertakings or subsidised by them with the twofold intention of improving the workers' wellbeing and increasing their output. Whatever the motive behind the creation of establishments of this kind, the fact remains that their existence creates and strengthens in the worker's mind a feeling of security for the present and for the future, while in the employer it awakens and increases a feeling of responsibility towards his staff. Finally, such institutions are bound to bring home to the employer and worker alike some idea of the interdependence of the different factors of production. For these reasons they offer a useful contribution to industrial relations.

A detailed description of the social institutions set up on the employers' initiative in Luxemburg would go beyond the bounds of the present study, which will therefore be limited to the most important undertakings, namely, the Arbed-Terres Rouges establishments. The description given below deals in succession with institutions providing for vocational training and guidance,

¹ The close contact between the Economic Council and the trade chambers is further shown by the fact that the Economic Council transmits the minutes of its meetings to the trade chambers for purposes of information.

those concerned with the safety of the workers, social insurance institutions, and those set up to improve the general wellbeing of the workers.

Vocational Training and Guidance

The Arbed-Terres Rouges group, including as it does both metal-working and mining establishments, has taken steps to organise vocational instruction in both branches either on their own initiative or by subsidising State institutions.

To begin with, the metallurgical branch is catered for by a vocational school established at Dudelange. Instruction is given at the works and is spread over a period of two years. It is compulsory for all apprentices¹ during hours of work. Hours spent in the classroom are paid for at the same rate as hours of manual labour². At Esch-a/Alzette, the most important of the centres of the Luxembourg divisions of the Arbed-Terres Rouges group, the vocational school is a State school. The length of the course is three years. The Arbed-Terres Rouges group pays two-sixths of the cost.

The Emile Metz Institute, which is situated at Domineldange, provides other technical educational facilities for the Arbed-Terres Rouges establishments in the Grand Duchy. Not only in Luxembourg is it considered to be a model institution, but this opinion is shared by experts in vocational training and guidance in a number of countries. The Institute was founded in 1913 by Mrs. Emile Metz-Tesch, but, as a result of the war, was completed only on 12 August 1922. It houses a vocational school, an apprenticeship workshop and a psycho-physiological laboratory. The ground floor of the central building contains a gymnasium, a library and reading room, the offices of the tutorial staff and a testing and experimental laboratory. On the first floor there are the Director's office, a reception room, classrooms and a large room which is used as a lecture hall. The premises on the second floor include a drawing class, a technological museum and the archives. In the basement are wash basins, bathrooms, vapour baths and a swimming pool.

The length of the course is three years. Two days a week are devoted to theoretical work. During the first year a start is made

¹ Apprenticeship is regulated by the Act of 5 January 1929.

² Admission to vocational schools is subject to the production of a certificate showing that the applicant has completed two years' study in a higher primary school

in the study of languages and history, elementary mathematics, chemistry and physics, which form the basis of all technical education. Free-hand drawing is also taught. It is only in the latter half of the second year of the course that special studies are begun, these including mechanics and the elements of machinery, chemical technology, mechanical technology, iron metallurgy and industrial hygiene. In addition, special courses are given during the third year on industrial electricity for electricians, iron machining for fitters, turners and locksmiths; foundry and pattern work for moulders and modellers. These special courses are run in connection with the practical classes. It is to be noted that swimming is compulsory twice a week, while gymnastic instruction according to the Hébert and Link methods is given every day.

The programme of practical training which is spread over three years covers the following branches. fitters, turners and planers, electricians, blacksmiths, modellers and moulders. During the first half-year apprentice fitters learn to use files¹. They are required, in the first place, to make a rectangular prism in metal and, subsequently, square and hexagonal prisms. When made, these prisms are given to the pupils who convert them into screws for adjustment bolts. The programme for the second six months includes the transformation of a cylindrical piece of metal into a square prism, by means of a burin. From this moment productive work begins and apprentices make the tools which they will use later, the forging operations being done by blacksmiths' apprentices, lathing work by turners' apprentices. During the third and fourth half-years the series of operations is continued while, in addition, apprentice fitters are taught forging by passing six to eight weeks in the blacksmith's shop, welding by a series of practical lessons, and are given some idea of turning, planing and milling operations on simple machines. They are then allowed to execute small jobs and repairs. Finally, during the fifth and sixth half-years each apprentice spends a more or less prolonged period of probation in the building and repair shops and completes his apprenticeship in the apprenticeship workshops. He is required to note down all jobs performed in a book which is regularly examined by the chief of the apprenticeship workshops.

It seems unnecessary to give such full details for other classes of

¹ Dr J. Amar's dynamographic file helps the instructors to discover and correct certain faults common to the beginner

apprentices, but a few remarks on the psycho-physiological laboratory seem to be indicated here. One of the outstanding features of vocational guidance, as it is conceived in the Metz Institute, is that it should not be a single intervention but rather a continuous process covering the whole period of apprenticeship¹. As a limited number of trades is aimed at, bearing many points in common, it is possible to practise a system of progressive guidance for apprentices while directing them towards specialised trades suitable to their aptitudes and capacities.

Before entering the Institute, apprentices have to pass an examination and only those showing the requisite aptitudes, capacities and knowledge are admitted. Candidates are examined from four standpoints: physical, medical, theoretical and psycho-technical. Nothing need be said here with reference to the first two points. The theoretical examination is limited to the verification of general knowledge corresponding to the primary school certificate which, moreover, must be produced. The psycho-technical part of the examination is summary and bears mainly on powers of concentration, how the candidate sees bodies in space, his sharpness of view, manual skill and receptivity.

The methods of vocational guidance employed being, as already stated, progressive, tests are continued throughout the duration of apprenticeship, but are particularly numerous during the first three months². Two important physical tests complete the information obtained from the entrance examination: the fatigue cycle test and the physical endurance test. These are followed by a test of the senses and in particular of the psycho-motive aptitudes and, finally, by a test of receptivity towards instruction and adaptability to work. The psycho-physiological laboratory has adopted the following tests: the perforation by hand of strips of paper, the drawing of compound figures by means of an instrument which, among other things, allows a study to be made of the co-ordination of the movements of the two hands and, finally, typewriting and the assembly of separate parts. Groups of eight

¹ Quoted from the terms used by Mr Robert, teacher at the Metz Institute, during a lecture given by him on 15 May 1930 to the Paris Conservatory of Arts and Crafts

² According to section 5 of the Act of 5 January 1929, "the contract of apprenticeship may be cancelled by either of the parties within the first four weeks of the apprenticeship in cases where a longer probationary period has not been fixed by contract. Nevertheless, this probationary period shall not exceed three months and shall be included within the apprenticeship period."

to ten apprentices take part in the tests, which bear mainly on work in which the use of the eyes and the hands is preponderant. Operations already performed are as a rule not given in tests, the same remark applying to all kinds of work which requires a certain amount of strength and might, therefore, unduly handicap apprentices whose physique is not of the best.

The psychological examination includes collective tests of the apprentice's memory, power of combination, technical comprehension and comprehension of space, which complete the data collected about him during the theoretical part of his studies. As to the study of the character and moral worth of the apprentice, personal contact between the pupil and teacher and between the apprentice and the shop instructor provides an initial source of information. The knowledge thus obtained is supplemented by the systematic observation of each apprentice both at work and at play. In this respect the gymnastic and swimming classes offer valuable opportunities. The apprentice's memory for movements and the skill with which he performs them, his courage, energy, daring, stamina and perseverance can thus be observed and the results conveyed to the head of the psycho-technical laboratory.

During the three years' study course the pupils receive a fixed wage, of which 10 per cent. is paid into a special fund. All deductions *plus* 5 per cent. interest are paid to the pupil at the end of his apprenticeship, provided his conduct and attention to his studies have not given rise to serious complaints.

In the mining branch there are no private vocational instruction and guidance institutions comparable with the Metz Institute. There is, however, a State school of mines at Esch-a/Alzette; the length of the study course is two years. Candidates for the post of overman or chief overseer are given theoretical instruction in the operation of mines. Classes are held during working hours but any loss of wages entailed is not refunded. Preparatory schools exist at Esch, Rumelange and Tétange where the study course is spread over two years. Classes are held after working hours. The cost of the school of mines and the preparatory schools is shared by the authorities of the district in which the schools are situated, the mine managements and the State.

In concluding these notes on vocational training and guidance institutions, it may be pointed out that the Arbed group grants subsidies to the higher primary school at Dudelange, and thus allows the miners' children to study free of charge. In addition, a special fund has been formed to provide highly gifted children of workers

and employees in the service of the Arbed group with funds to enable them to study at secondary and higher educational establishments. The amount of such subsidies varies with the merit of the pupil and the degree of his studies. Finally, with the help of the Mrs. Emile Metz-Tesch Foundation, scholarships have been instituted for young persons of outstanding intelligence. These scholarships allow a certain number of pupils selected from among the workers' and employees' children to complete a course of secondary and higher studies.

Prevention of Accidents

The central management of the Arbed-Terres Rouges amalgamation includes a service dealing with accident prevention and industrial medicine. This service, which is under the orders of the director of administrative and social questions, is required to make suggestions to the general management as to the best way to comply with the legal requirements relating to accident prevention and industrial medicine¹.

Industrial diseases being extremely rare in Luxembourg both in the metal and iron mining industries, the service is mainly concerned with accident prevention. In this connection psycho-technical, psychological and practical methods are employed. Reference has already been made to the psycho-technical work carried on by the Metz Institute. All that need be added is that from the standpoint of accident prevention the aptitude of the individual for his work must be considered as an important element of safety.

The psychological methods employed are similar to those in use in other establishments of the same kind. Publicity by posters is carried out in all divisions of the Arbed-Terres Rouges amalgamation. These posters are intended to ensure the collaboration of the individual worker by giving him a knowledge of prudence, the precautions to be taken during work and the treatment of injuries. In addition, notices and railings arranged in zigzag fashion draw attention to passage ways, means of access and dangerous machinery.

¹ These include the Act of 28 August 1924 concerning the safety and health of persons employed in industrial and commercial undertakings or in work in construction, adaptation, repairs or excavation, the Grand Ducal Order of the same date respecting provisions for the health and safety of persons employed in industrial and commercial undertakings, the Grand Ducal Order of 26 April 1930 respecting the operation of underground and open mines and quarries.

Periodical lectures are arranged at which attendance is compulsory. They are given in each service at fixed dates and during working hours. Reference to them has already been made in the part of the study dealing with workers' committees. The subjects of these lectures are drawn from the "Accident Prevention Rules", a copy of which is given to each worker when he is engaged. Any serious accidents which occur are discussed and stress is laid on the means of avoiding them in the future. The organisation of accident prevention is further strengthened by periodical inspection by private organisations specialising in the supervision of plants from the accident prevention standpoint. In addition to all these measures, there is of course the preventive work carried on by the workers' safety inspectors.

Although it is really a social welfare institution, attention must also be called to the first-aid service which works in conjunction with the accident prevention service. In all large metal works in the Grand Duchy each service has a first-aid squad composed of workers skilled in first-aid work. Numerous first-aid posts, sick rooms provided with complete outfits, and motor ambulances for conveying injured persons to hospital are placed systematically throughout the works.

Social Insurance Institutions

Before proceeding to study the social insurance institutions set up or subsidised by the Arbed-Terres Rouges group¹, a few remarks must be made regarding the social insurance laws of Luxemburg.

Compulsory insurance against industrial accidents (and certain occupational diseases) was introduced by the Act of 5 April 1902, which was subsequently amended by the Acts of 23 December 1904, 12 May 1905, 21 April 1908, 20 December 1909, 17 December 1925 and 6 September 1933². Insurance covers all wage-earners in industry, the handicrafts, and agricultural and forestry undertakings, with the exception of salaried employees in such undertakings and foremen and technical employees whose annual remuneration exceeds 10,000 francs. The cost of insurance is borne by the employers, but the State pays half the administrative expenses.

¹ In reading the following pages it should be borne in mind that the steps taken by the Arbed and Terres Rouges establishments on behalf of their staff extend to the "Comptoir de vente 'Columeta'", even when this is not definitely stated.

² The Act of 17 December 1925 introduced the Social Insurance Code.

Compulsory sickness insurance is governed by the Acts of 31 July 1901, and 17 and 31 December 1925. It applies to all wage-earners, workers and salaried employees alike, provided, in the case of salaried employees, that their annual remuneration does not exceed 10,000 francs. Persons not liable to compulsory insurance may contract voluntary insurance, provided that their total annual income does not exceed 12,000 francs. The resources are derived from contributions, one-third of which are paid by the employers and two-thirds by the insured. Contributions are fixed as a percentage of wages and may not exceed 6.75 per cent. of the normal wage.

Old-age, invalidity and survivors' insurance was introduced by the Act of 6 May 1911, which was subsequently amended by the Act of 2 June 1914, the Social Insurance Code of 17 December 1925 and, finally, by the Act of 20 November 1929 concerning the re-assessment of old-age and invalidity pensions. Insurance is compulsory for all wage earners over sixteen years of age. The resources are derived from contributions payable by the insured persons and the employers and from State and communal subsidies. The contributions payable by the insured person and the employer amount to 4 per cent. of the wage, one-half of which is borne by the employer, the other half by the insured person. The Act of 29 January 1931 set up a special pension insurance fund for salaried employees, contributions being fixed at 5 per cent. of the total annual remuneration for both employers and insured persons.¹

The Arbed-Terres Rouges undertakings have gone beyond the statutory obligations. In case of fatal accidents, the Act of 6 September 1933 makes provision for the payment, in addition to a pension, of funeral benefit equal to one-fifteenth of the nominal wage, with a minimum of 600 francs and a maximum of 800 francs. In the Arbed-Terres Rouges works a supplementary allowance of 500 francs is granted for each member of the family for whose maintenance the deceased person—whether married or single—was responsible. These sums are obtained from the income of a fund set up for this purpose by Mrs. A. Mayrisch of St. Hubert and

¹ No details will be given here concerning social assistance given by the State: unemployment relief; assistance of elderly, infirm and blind persons; medical aid for persons in necessitous circumstances, etc. The employers and wage earners do not bear any share in the cost of such measures. It is to be noted that theoretically a quarter of the cost of unemployment relief is supposed to be met by the employers and a quarter by the wage earners, but in practice the State and the municipal authorities provide the necessary funds.

Miss Andrée Mayrisch in memory of Mr. Emile Mayrisch, who was Chairman of the management of the Arbed-Terres Rouges companies prior to Mr. Aloyse Meyer.

As has previously been stated, accident insurance and sickness insurance do not cover salaried employees whose annual remuneration exceeds 10,000 francs. In order to remedy this, the management of the Arbed-Terres Rouges group insures against industrial and non-industrial accidents (with private companies and free of charge to the insured persons) all its employees as well as those of the sales organisation "Columeta". Like the metallurgical company of Ougrée-Marihaye at Rodange, it has also set up a special accident and sickness fund for salaried employees of the Arbed-Terres Rouges- "Columeta" groups. This fund began operations on 1 January 1923. It works on the same lines as the mutual-aid societies sanctioned by the Act of 11 July 1891 and admits all salaried employees of the three undertakings as paying members. It may admit employees of concerns connected with the societies. It may also admit, but on a non-paying basis, members of the families of paying members recognised as such by the general assembly of the fund. The cost is borne equally by the employers and the insured. The companies also undertake the actual management of the fund, meet the administrative expenses and supply it with the necessary office materials.

Insured persons are free to choose their doctor and curative establishment, while no restrictions are imposed in connection with articles prescribed by a doctor. No arrangements are made for lump sum payments or special prices and members of the fund are treated in the same way as private patients. They are required to pay the cost of their treatment on presentation of a detailed and receipted bill, doctors' fees being paid immediately and the receipted bills sent to the fund by the person concerned for reimbursement. The extent of the insured person's share (10 to 50 per cent.) is fixed in proportion to the opportunities which various types of treatment afford for abuses. The fund reduces receipted bills to the level of the official scale published by the Government and repays to its members its share of the expenses incurred.

It is to be noted, in connection with accidents and sickness, that the Arbed-Terres Rouges group has taken the necessary steps to provide the best possible treatment for its staff in hospitals and curative establishments. The Dudelange hospital, which belongs to the Arbed group, receives sick and injured staff from the Dudelange works. It also admits their wives and children and, if

accommodation permits, other members of the community. The hospital has two operating theatres, a modern hydro-therapeutic institution, a mechano-therapeutic room, two radiology and radio-therapeutic rooms, a maternity ward, isolation wards for tuberculosis and epidemic diseases, open balconies for fresh-air treatment, and a disinfection service. Thanks to the generosity of the Norbert Metz Foundation, the Dommeldange works has twenty beds at its disposal in the local hospital, and in the case of epidemics the whole premises are put at the disposal of the Arbed group.

At Esch-a/Alzette, the companies are allowed to use the town hospital. This hospital, which is reputed to be a model institution, was opened on 15 March 1930 at a cost of sixteen and a half million francs. It belongs to a society formed by the town of Esch and the Arbed and Terres Rouges concerns, and receives only paying patients; but the two concerns have priority rights as regards the admission of their staff. It contains 225 beds, of which twenty are reserved for tubercular cases and twenty for infectious diseases such as scarlet fever, typhus and diphtheria, the forty special beds being situated in two separate isolation wards¹. Patients are free to choose their doctor. The nursing and managing services are staffed by trained sisters of mercy. Many years were spent in completing the planning, building and endowment of the institution, which is staffed and managed according to the latest scientific requirements.² The results achieved have exceeded all expectations from the standpoint of treatment and administration, and the hospital covers its expenses solely from the revenue derived from patients' fees³.

As regards invalidity and old-age insurance, the Arbed-Terres Rouges group has set up a pension fund for workers, widows and orphans which supplements the invalidity, old-age and survivors' pensions paid by the invalidity and old-age insurance scheme. These supplements may amount to as much as 1,800 francs a year after fifteen years' service, and may be increased up to 3,600 francs

¹ The morbidity and sickness incidence was particularly high in the Luxembourg iron and steel trades during the influx of alien workers. It has shown a tendency to diminish since the labour turn-over has decreased as a result of the depression.

² It is interesting to note that the hospital staff works on the basis of an eight-hour day.

³ A description of the other hospital and curative establishments in Luxembourg which, though neither belonging to nor subsidised by the undertakings under consideration, may be used by their staff, would go beyond the bounds of the present study. It is regretted in particular that space precludes any detailed account of the Vianden sanatorium which was only recently opened, and which is equipped according to the most modern requirements.

a year after forty-five years' service. When a worker completes fifty years' uninterrupted service, he becomes entitled to a supplement which brings his monthly pension up to the average monthly wage earned by him during his last three months' service. Supplements for widows may amount to as much 1,080 francs a year after fifteen years' service and are increased up to 2,160 francs after forty-five years' service. If the husband has served the company for fifty years without interruption, the pension payable to the widow is equal to 60 per cent. of that received by the husband. The supplement for orphans under eighteen years of age may amount to 300 francs a year.

In addition, retired workmen receive an annual allowance composed of a basic amount and a fixed increment for each child under eighteen years of age. The hospital which the Arbed group formerly owned at Esch-a/Alzette and which was replaced by the Esch town hospital mentioned above, has been converted into a home, in which are housed elderly workers in receipt of a pension from the Arbed and Terres Rouges companies.

The two companies also set up a pension fund for their salaried employees, which was conceived on very liberal lines. Employees paid a contribution equal to 5 per cent. of their salary towards the upkeep of the fund, 11 per cent. being paid by the company. But when the Act of 29 January 1931 authorised the State to set up a salaried employees' pension fund, the pension fund for salaried employees constituted by the Arbed and Terres Rouges companies ceased to operate, but all rights acquired at the moment of the introduction of the Act have been safeguarded.¹

After fifty years of uninterrupted service, salaried employees are entitled, in the same way as workers, to an annual pension equal to their last fixed salary with a maximum of 50,000 francs, the companies paying the necessary supplementary sums. In such cases, the widow receives 60 per cent. of the income derived by her husband at the moment of his death from pension sources (pension from the fund and supplements from the company). Finally, the Arbed and Terres Rouges companies also make a yearly allowance to salaried employees formerly in their service, the amount of this allowance varying according to circumstances.

¹ For employees who, on account of health reasons cannot be admitted to the pension fund, the Arbed and Terres Rouges companies open individual savings accounts bearing 5 per cent. interest, into which the insured person pays 5 per cent. of his wages, while 11 per cent. is paid by the company.

Under the heading of social welfare must also be included the maternity allowances which the companies grant at confinement to the wives of the workers and salaried employees. This allowance amounts to 250 francs and, in the case of workers, is granted on condition that they have been employed at least six months by the company. It may be added that in the Arbed's Dudelange hospital, five rooms with seven beds are reserved for the confinement of the wives of workers and salaried employees. They are entitled to special rates for their maintenance.¹

This section of the present study may be concluded with a short description of the institutions set up for the protection of childhood, as these play an important part in the social work carried on by the Arbed and Terres Rouges establishments. The two companies have spent large sums for the prevention and treatment of tuberculosis among the children of their staff. They have acquired twenty beds in the seaside home at Clemenskerke on the Belgian coast, which can accommodate eighty children annually for a period of three months. Children between five and thirteen years of age suffering from scrofula, rickets, anaemia or general debility are admitted, provided they are not contagious cases. The entire cost entailed is borne by the companies. The same applies to the children's home at Rédange, where the company maintains five beds, and at Bettendorf, Grevenmacher, Itzig, Limpertsberg, and Rumelange. In all these homes, children of one to two months are admitted either because they must be separated from their family on account of contagious tuberculosis or because they are orphans. Children are allowed to remain in the homes until they reach three or four years of age.

Special reference must be made to the children's home at Kreutzberg, near Dudelange. Founded in 1920 by the two companies, this home is situated on the Kreutzberg Hill at an altitude of 280 metres and about a mile from the town of Dudelange. The establishment includes a preventive hospital with beds for fifty-eight children. Further, a sanatorium with fifteen beds has been set up for children suffering from open tuberculosis. The establishment is built in the middle of a park of two and a half hectares, on a picturesque site. It is surrounded by wide plains, fields and forests; the pure air, dry soil and abundant supply of

¹ Attention must also be called to the Poeckeshof nurseries at Esch-a/Alzette. This institution was founded in 1897 by the Red Cross Society and the Arbed-Terres Rouges Amalgamation. The two companies fitted up the premises required by the nurseries at a cost of 54,000 francs

excellent water together constitute very favourable conditions for patients treated in the establishment.

The preventive hospital is established in a large mansion house which in other days was the residence of Mr. E. Mayrisch, former chairman of the management of the Arbed Company. Isolated from the rest of the establishment, well ventilated and provided with the requisite comforts, it lends itself admirably to the work of social hygiene to which it is dedicated. Educational courses are given on the lines of the official syllabus of the State schools and in accordance with timetables which make all due allowances for medical requirements: regular rest, physical training, hydro-therapy, helio-aerotherapy. The preventive hospital can accommodate from fifty to sixty boys and girls from the earliest infancy up to the age of thirteen.

The sanatorium has accommodation for about fifteen patients and receives children up to the age of fourteen. It is situated far enough from the main building to avoid any risk of contagion, and all the necessary measures to this end are taken with regard to the staff and patients. No charge is made either in the sanatorium or preventive hospital, and patients are allowed to remain in these establishments for a period varying from three months to two years.

In summer, school classes are held in the open air. This is a method practised to an increasing extent by the Arbed and Terres Rouges companies to improve the health of the children of their staff. With this end in view, the companies grant subsidies to open air schools in the forests of Dudelange and Esch-a/Alzette. The Dudelange forest school has accommodation for forty-two children. The initial cost of the establishment was met by the Arbed, which also bears the cost of its working expenses, while the town pays the wages of the schoolmistress in charge. The school situated near Esch-a/Alzette in the Holzenberg forest has accommodation for eighty children. Its original cost was paid in equal parts by the Arbed and Terres Rouges. The companies also send annually a group of thirty to forty children either to the children's thermal camps at Mondorf-Etat in the south-east of Luxemburg, which are organised by the State, or to holiday camps organised by private initiative.

Workers' Welfare Schemes

The first institution to be considered under this heading is that of family allowances. In order to help their staff who have family responsibilities, the companies pay a monthly allowance equal to 70 francs for each of the first three children and 85 francs for every child after the third. These allowances are paid until the children reach eighteen years of age in the case of workers and until the twentieth birthday in the case of salaried employees. In addition, married salaried employees and workers are allowed an indemnity — 1.10 franc a day for the workers and 50 francs a month for the salaried employees.

Attention must also be called to the bonuses paid to staff for length of service. At the end of the year, salaried employees receive a bonus based on their salary but which varies with the profits made during the year, while workers, when profits permit, receive a bonus composed of a fixed amount equal to the dividend on one of the company's shares, *plus* a supplement of 10 per cent. for each year of service.

On completing a period of twenty years' uninterrupted service, each worker receives an annual bonus of 150 francs which is paid into a savings account bearing 5 per cent. interest. At the end of a similar period of service, salaried employees are granted a special holiday of one week. Both workers and salaried employees also receive a souvenir from the company to which they belong.

Another important addition to wages takes the form of cheap dwellings and building allowances. The Arbed and Terres Rouges companies provide their workers with cheap dwellings, priority being given length of service and category of employment. More than 1,500 such dwellings, including 1,032 houses, are occupied by their workers, who pay a rent which barely exceeds one-quarter of the amount they would normally have to pay.

The two companies have provided their salaried employees with 345 free houses, including 364 dwellings. Together with the "Columeta" company they have formed a housing society with a view to the acquisition of land in Verlorenkost, in the suburbs of Luxemburg. Houses will be built on this land and rented to their employees. This society, which was latterly taken over by the Arbed, also sells building sites at very favourable prices to the staff of its three foundation members.

Workers and salaried employees desiring to build their own homes are granted loans and provided with building materials at reduced prices. Formerly the companies granted building bonuses, but these were abolished on 1 January 1932, as were loans made to workers. As a result of these arrangements, 271 salaried employees and 815 workers had become house-owners by May 1933.

The two companies have also taken steps to enable their staff to purchase foodstuffs on very favourable terms by providing a part of the initial and working capital of a joint purchasing society. In addition, they provide at very low rates the coal required by their married workers and salaried employees, and the companies' pensioners.

A domestic science school, established by the companies at Esch-a/Alzette, gives practical instruction in household matters to the wives and daughters of the companies' workers and salaried employees.¹

Salaried employees have their own separate premises called "casinos" where they may hold meetings, have meals at reduced prices and spend their leisure time. Games and libraries are provided in the "casinos", which have been established in Luxembourg, Dommeldange, Dudelange and Esch-a/Alzette. The Luxembourg "casino" is established in the headquarters of the central management of the Arbed, Terres Rouges and "Columeta" companies. It includes a dining room and reception rooms for the directors, and a dining hall, library and reading rooms for salaried employees. A hall with seating accommodation for 400 persons is used for lectures, theatrical and cinema performances, and concerts. A terrace commanding a wide view, recreation rooms and a gymnasium complete these premises.

CONCLUSIONS

This study has been largely devoted to a description of the various aspects of the Arbed-Terres Rouges Amalgamation. It was thought impossible to limit the study to an outline of the essential features of Luxembourg legislation concerning industrial relations, which would pass over in silence the steps taken by private ini-

¹ A woman social assistant is attached to each of the Luxembourg and French Divisions of the Arbed-Terres Rouges Amalgamation.

tiative to complete these provisions and to facilitate their application. On the other hand, a complete description of the latter would have required more space than was available. Concrete examples had therefore to be sought, and these have been taken from a group of undertakings which is economically the most important in the Grand Duchy. These undertakings have therefore been described in some detail. From whatever angle they be considered, they are a striking example of horizontal and vertical organisation, unique in Luxemburg and extending far beyond its frontiers. From this standpoint alone they are obviously worthy of study.

What conclusions are to be drawn from this study? While no attempt has been made to estimate the importance of Luxemburg legislation dealing with industrial relations, it is a striking fact that since 1921 industrial peace has reigned in that country. Should this peace at any time be imperilled, a network of machinery exists to deal with the workers' and employers' claims and to keep them within reasonable bounds, and this despite the fact that so far the State has taken no steps to set up conciliation and arbitration boards.

लाल बहादुर शास्त्री राष्ट्रीय प्रशासन अकादमी, पुस्तकालय
Lal Bahadur Shastri National Academy of Administration, Library
मुस्सूरी
MUSSOORIE.

यह प्रस्तक निम्नांकित तारीख तक वापिस करनी है।

This book is to be returned on the date last stamped.

105840
अवाप्ति संख्या
Acc No 105840
वर्ग संख्या _____
Class No. _____
पुस्तक संख्या _____
Book No. _____
लेखक _____ । I
Author _____ । I
शीर्षक _____
Title _____

331
Int

LIBRARY
LAL BAHADUR SHASTRI
National Academy of Administration
MUSSOORIE

Accession No 105840

1. Books are issued for 15 days only but may have to be recalled earlier if urgently required.
2. An over-due charge of 25 Paise per day per volume will be charged.
3. Books may be renewed on request, at the discretion of the Librarian.
4. Periodicals, Rare and Reference books may not be issued and may be consulted only in the Library.
5. Books lost, defaced or injured in any way shall have to be replaced or its double price shall be paid by the borrower.